

ECOTOURISM CULTURAL IMPACT ANALYSIS

By

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ABSTRACT

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Ecotourism is one of the fastest growing segments of tourism, and is sometimes situated in the natural settings of the traditional homelands of indigenous peoples. Numerous tourists have visited indigenous ecotourism destinations to appreciate indigenous peoples' unique cultures. Nevertheless, uncertain, unexpected, and undesired cultural impacts may result when tourists and indigenous people directly interact with each other. In addition, ecotourism development that does not respect indigenous values and customs or overexploits may cause undesired cultural impacts and consequently endanger the indigenous culture. Accordingly, it is crucial to understand ecotourism-induced cultural impacts and the mechanisms that work to create cultural impacts from ecotourism. But little research provides explanations for the mechanisms forming ecotourism-induced cultural impacts.

The primary problem of the study was to examine the relationships among acculturation, ecotourism, and cultural impacts to understand the ecotourism acculturation mechanism that shapes ecotourism cultural impacts. A drop-off and pick-up survey was conducted in the Saviki Community for data collection with 321 usable questionnaires (achieved 92.5% response rate). Structural Equation Modeling (using the Mean- and Variance-adjusted Weighted Least Square estimation) was employed to examine the hypotheses of relationships including direct and indirect effects among the five constructs of the study (i.e., cultural self-identification, personal cultural exposure and interaction, perceived positive cultural impact, perceived negative cultural impact, perceived

conformity to principles of indigenous ecotourism and ecotourism).

Results showed that residents' cultural self-identification had negative direct and indirect effects on the residents' perceived positive cultural impact. Residents' personal cultural exposure and interaction with tourists had positive direct and indirect effects on the residents' perceived positive cultural impact. Residents' perceived ecotourism development that conformed to indigenous ecotourism and ecotourism principles positively affected the residents' perceived positive cultural impact. Residents' cultural self-identification negatively affected but residents' personal cultural exposure and interaction positively affected the residents' perceived ecotourism development that conformed to indigenous ecotourism and ecotourism principles. These findings contributed to a better understanding of the ecotourism acculturation mechanism that shapes ecotourism cultural impacts, which can be applied when devising management strategies for cultural impact protection in ecotourism destinations.

The study also examined the relationships between the indicators of the degree of acculturation and the indicators (i.e., an assimilation-related indicator, an integration-related indicator) of the definitions of the degree of acculturation. Results revealed that one acculturation indicator, ethnic identity, had a significant and positive relationship to the assimilation-related indicator. Three acculturation indicators (i.e., ethnic identity, music preference, friends' ethnic groups) had a significant and positive relationship to the integration-related indicator. These indicators reflected the definition of assimilation and integration well; hence, they are suitable to be employed to estimate the degree of assimilation and integration in future acculturation-related research.

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Dedicate to my father, Jin-Lang Liou,
to my mother, A-Fen Su Liou,
to my sister, Jin-Yi Liou,
to my sister, Jhu-Li Liou,
and to my sister, Ai-Syuan Liou.

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CHAPTER 1

INTRODUCTION

Background

Ecotourism is perceived as an alternative form of mass tourism (Swarbrooke, 1999). It is often employed as a method to diminish the negative impacts of mass tourism, and is considered to be more capable than mass tourism of conserving the environment and enhancing the well-being of local residents (TIES, 2006; Wearing *et al.*, 2010). Swarbrooke (1999) proposed ecotourism as a means in which “the main motivation for travel is the desire to view ecosystems in their natural state, both in terms of wildlife and the indigenous population (Swarbrooke, 1999, p. 218).”

Ecotourism is one of the fastest growing segments of tourism, currently blooming in the natural settings of the traditional homelands of indigenous peoples (Dagert, 2001; Zeppel, 2006). In order to successfully operate ecotourism in indigenous territories, Zeppel (2006) proposed that “indigenous ecotourism” should be a system in which attractions are developed upon the basis of indigenous values, are owned by indigenous people, and have indigenous interpretations for local natural resources and indigenous culture. Numerous tourists have visited indigenous ecotourism destinations to appreciate indigenous peoples’ unique cultures. Nevertheless, ecotourism development that is not suitable to or does not respect indigenous values and customs may cause undesired cultural impact (e.g., indigenous people’s values are replaced by tourists’ cultural values) and consequently endanger the indigenous culture (Besculides, Lee, & McCormick, 2002; Gartner, 1996; Zeppel, 2006).

There are few research studies that provide explanations for the mechanisms (i.e., the processes that lead to cultural impacts) of cultural impacts from ecotourism. In addition, the cultural impacts are often implicit, involved in individuals’ value systems, and most of

them are intangible (Caldicott & Fuller, 2005; Greenwood, 1977). They are difficult to measure and often ignored (Beeton, 1998; Caldicott & Fuller, 2005; Koster & Randall, 2005). These ignored positive and negative cultural impacts, in general, become some of the external benefits and costs of ecotourism development (Beeton, 1998; Caldicott & Fuller, 2005; Koster & Randall, 2005). The desired cultural impacts (i.e., positive cultural impacts) of ecotourism could be enhanced through effective management strategies. The undesired cultural impacts (i.e., negative cultural impacts) of ecotourism could be aggravated as a result of being ignored, and as being short of effective management strategies to mitigate these impacts. Accordingly, it is crucial to understand ecotourism-induced cultural impacts and the processes that lead to cultural impacts. This understanding can assist in devising effective management strategies for protecting the indigenous culture in the destination that is developing ecotourism.

In order to better understand ecotourism-induced cultural impacts from ecotourism, this study proposed to employ acculturation factors, the principles of indigenous ecotourism and ecotourism, and ecotourism cultural impacts (i.e., positive and negative cultural impacts) as constructs in the analyses of testing hypotheses to clarify these impacts and mechanisms. The results of these analyses will contribute to the clarification of the relationships among acculturation, cultural impact, and ecotourism, which can be applied when devising management strategies for cultural impact protection in the destination that is developing ecotourism. For example, an ecotourism manager can design strategies to mitigate negative cultural impacts by utilizing the results.

Statement of Research Problem

The study employed acculturation theory and the principles of indigenous ecotourism and ecotourism to explain some mechanisms that shape cultural impacts from ecotourism. The primary problem of the study was to examine the relationships among 1) acculturation: residents' degrees of acculturation; 2) ecotourism: residents' perceived degree of ecotourism development that conforms to indigenous ecotourism and ecotourism principles; and 3) cultural impact: the degree of the residents' perceived cultural impact (i.e., positive and negative cultural impacts) of ecotourism development. The study examined both direct effects and indirect effects for these relationships. Aside from this, the study also examined the relationships between the indicators of the degree of acculturation and the indicators (i.e., an assimilation-related indicator, an integration-related indicator) of the definitions of the degree of acculturation.

Purpose of the Study

Little literature exists to provide a theoretical basis for understanding the creation process of cultural impacts from ecotourism development. The primary purpose of the study was to provide a better understanding of the processes that induce cultural impacts from ecotourism development. A better understanding of the mechanisms and processes will enable managers and residents of an ecotourism destination adjust their actions to enhance desired cultural impacts and to diminish their undesired cultural impact. This study proposed to adopt acculturation theory and the principles of indigenous ecotourism and ecotourism to explain some of the mechanisms that form cultural impacts. Its results showed the relationships among acculturation (residents' degrees of acculturation), ecotourism (residents' perceived degree of ecotourism development that conforms to

indigenous ecotourism and ecotourism principles), and cultural impact (the degree of the residents' perceived positive and negative cultural impact from ecotourism development), which allowed people to understand selected ecotourism acculturation mechanisms that shape ecotourism cultural impacts.

In this study, indicators were designed to estimate the degree of acculturation. Nevertheless, little acculturation research provides information that bridges these indicators with the definition of acculturation. By examining the relationships between acculturation indicators and the definitions of two types of acculturation (i.e., an assimilation-related indicator, an integration-related indicator), its results were able to reveal whether these acculturation indicators reflected the definitions of acculturation well. These findings facilitated the selection of acculturation indicators that reflected the definitions of acculturation in research; thereby, they were capable of enhancing the validity of measuring the degree of acculturation.

Justification for the Study

Travel to indigenous ecotourism destinations is expanding (Zeppel, 2006). In general, indigenous culture has been changed through direct interaction with the dominant tourist culture because tourists have spent time and money more freely (Gartner, 1996; Suinn & Khoo, 1992). In the wake of cultural change caused by tourists' visiting, in some cases, residents had become aware of the collapse of their cultural meaning (Greenwood, 1977). They knew something was wrong, but didn't know what was wrong or what to do (Greenwood, 1977)., Uncertain, unexpected and undesired changes may result when tourists and indigenous people directly interact with each other, requiring researchers to help with monitoring.

Uncertainties abound in the interaction between the indigenous culture and tourist culture. The outcomes of this interaction could be desired or undesired cultural impacts. Researchers also lack enough knowledge of the cultural-related-internal workings (i.e., processes, mechanisms) that influence or cause cultural impact. Acculturation theories provide an interpretation for this interaction. In the view of acculturation theories, acculturation occurs when indigenous cultures and tourist cultures directly interact; subsequently, this causes cultural impacts (Gartner, 1996; Suinn & Khoo, 1992). Nevertheless, the relationship between acculturation and cultural impacts from ecotourism still should be verified. In addition, the way ecotourism operates is the other source that could influence the creation of cultural impacts. For instance, promoting local traditional crafts in an ecotourism destination may facilitate the conservation of the local culture of these traditional crafts. The principles of indigenous ecotourism and ecotourism have been recommended for ecotourism operations in order to maximize positive impacts and minimize negative impacts (TIES, 2012; Zeppel, 2006). Accordingly,

in order to reduce the uncertain cultural outcome from ecotourism development, it is imperative to assess the positive and negative cultural impacts in an indigenous ecotourism destination and to verify relationships among residents' degrees of acculturation, the degree of ecotourism development that conformed to the principles of indigenous ecotourism and ecotourism, and residents' perceived cultural impact. The findings of the above could be helpful to provide knowledge of mechanisms that causes cultural impact.

Numerous indicators have been developed to measure the degree of acculturation. However, there is not yet a consensus on selecting acculturation indicators. Some researchers have chosen one dimension of indicators (e.g., language use) (Marin & Gamba, 1996; Palmer et al., 2005), but other researchers have adopted various cultural-related dimensions of indicators to assess the degree of acculturation (Cuellar, Harris, & Jasso, 1980; Yeh, 2003). Few studies have verified whether these acculturation indicators reflect the "true" definition of acculturation, thus a need to study this further is warranted.

Conceptual Model

The study aimed to understand the relationships among acculturation, ecotourism, and cultural impact. These relationships involved two constructs of the degree of acculturation (i.e., cultural self-identification, personal cultural exposure and interaction), one construct of perceived conformity to principles of indigenous ecotourism and ecotourism, and two constructs of perceived cultural impact of ecotourism (i.e., perceived positive and negative impacts). In addition, the study also examined the relationship between two types of acculturation indicators (i.e., an assimilation-related indicator, an integration-related indicator). These relationships, constructs, and indicators are shown in Figure 1-1.

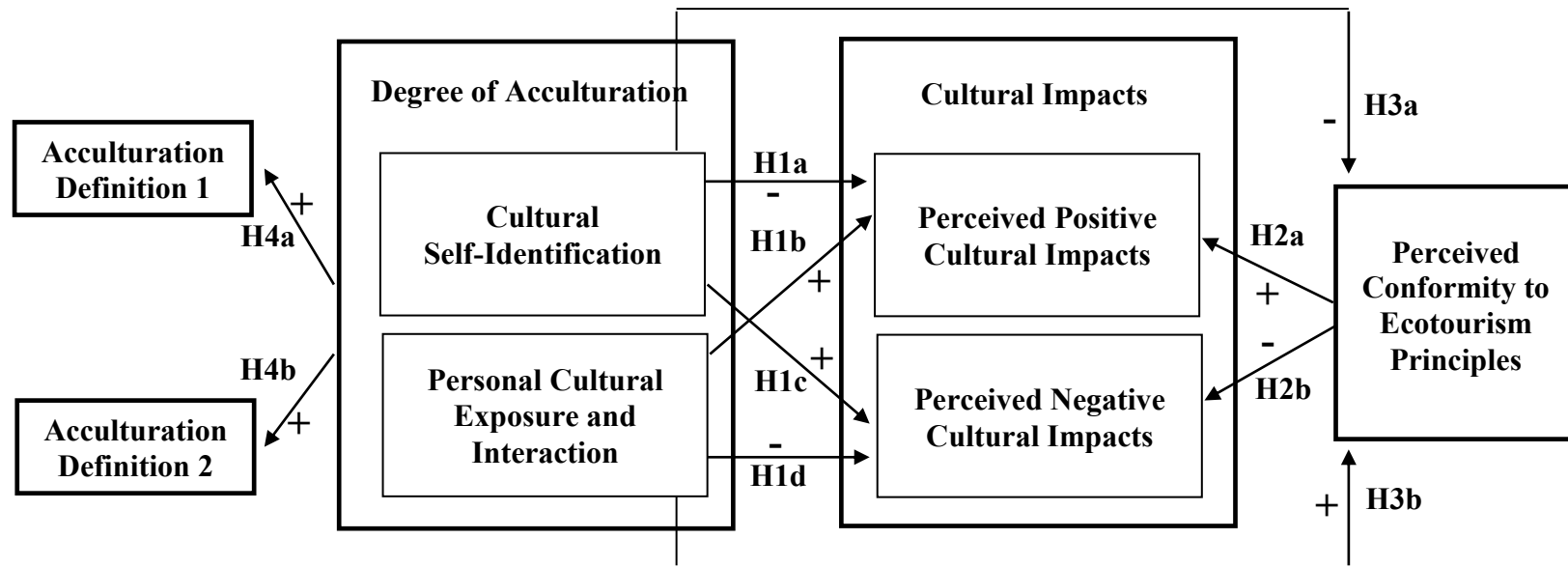


Figure 1-1. The Relationships Among Acculturation Definitions, the Degree of Acculturation, Conformity to Ecotourism Principles, and Cultural Impacts

Hypotheses

Based on the above conceptual model, the following four general research hypotheses, which consisted of ten specific sub-hypotheses (i.e., ten null hypotheses), were proposed and tested.

Hypothesis 1. Residents' acculturation does not affect their perceived cultural impact.

1-a. Residents' acculturation of their cultural self-identification does not negatively affect the residents' perceived positive cultural impact.

1-b. Residents' acculturation of their personal cultural exposure and interaction does not positively affect the residents' perceived positive cultural impact.

1-c. Residents' acculturation of their cultural self-identification does not positively affect the residents' perceived negative cultural impact.

1-d. Residents' acculturation of their personal cultural exposure and interaction does not negatively affect the residents' perceived negative cultural impact.

Hypothesis 2. Residents' perception of ecotourism development that conforms to indigenous ecotourism and ecotourism principles does not affect the residents' perceived cultural impact.

2-a. Residents' perceived ecotourism development that conforms to indigenous ecotourism and ecotourism principles does not positively affect the residents' perceived positive cultural impact.

2-b. Residents' perceived ecotourism development that conforms to indigenous ecotourism and ecotourism principles does not negatively affect the residents' perceived negative cultural impact.

Hypothesis 3. Residents' acculturation does not affect their perception of ecotourism development that conforms to indigenous ecotourism and ecotourism principles.

3-a. Residents' acculturation of their cultural self-identification does not negatively affect the residents' perceived ecotourism development that conforms to indigenous ecotourism and ecotourism principles.

3-b. Residents' acculturation of their personal cultural exposure and interaction does not positively affect the residents' perceived degree of ecotourism development that conforms to indigenous ecotourism and ecotourism principles.

Hypothesis 4. Acculturation indicators are unrelated to two levels of acculturation – assimilation and integration.

4-a. The indicators of acculturation are not positively related to the indicator of the definition of assimilation.

4-b. The indicators of acculturation are not positively related to the indicator of the definition of integration.

Delimitations

There were three delimitations in the study. They were:

1. The study will be limited to the subjects who were aged 20 and over and were residents living in a single indigenous community that is one of six villages within an indigenous society.

2. The study examined the acculturation effects for the residents of an indigenous ecotourism destination. This acculturation study solely tested the tourist-generated effects of acculturation. Acculturation might be caused by other sources of cultural interactions (e.g., studying or working with people with different cultures).

3. The study tested the five most important positive cultural impacts and five most important negative cultural impacts that were selected from the results of the pilot study. The other cultural impacts were not tested in the study.

Limitations

The study was limited by the following:

1. The forming of acculturation and cultural impacts are dynamic processes. The study conducted the procedure of data collection in a two-month time period (from November 29, 2012 to January 21, 2013). Thus, its results were absent of the long-term dynamic process of the phenomena of acculturation and cultural impact. For instance, the results of acculturation and cultural impact may effect themselves in the long term, which could shape a feedback loop. This feedback effect was not shown in the study results.

2. The research site of the study was an indigenous tribal community that has been conducting ecotourism. Its culture is an indigenous culture (i.e., Tsou culture) that is noticeably different from non-indigenous cultures. Hence, the study results may not be

applicable to ecotourism destinations with a non-indigenous culture. However, it gives insights into other indigenous ecotourism sites.

3. The study results may be related to other factors outside the control of the community and the research design. For instance, the selected site had a natural disaster (i.e., a flood) in 2009 that caused tourists to stop visiting the community for about one year.

Definition of Terms

The following are the definitions of terms that were employed in this study:

Acculturation: Acculturation occurs when at least two or more cultures come in contact with each other, which induces succeeding changes in one or all related cultures (Berry, 1980; Redfield, Linton, & Herskovits, 1936; Suinn & Khoo, 1992). Acculturation is a three-phase process consisting of contact, conflict, and adaptation (Berry, 1980). The indicators that measure acculturation can be found in the survey instruments.

Ecotourism: Ecotourism is a type of tourism in natural areas that provides tourists with the experience of the natural state of wildlife and the indigenous population (Swarbrooke, 1999). Ecotourism is capable of conserving the environment and enhancing the well-being of local residents (TIES, 2006).

Ecotourism Acculturation Mechanism: A system that explains the phenomena of shaping ecotourism cultural impacts during the acculturation process.

Ecotourism Cultural Impacts: Ecotourism cultural impacts are the cultural impacts that are generated by ecotourism development (Diamantis, 1999; Gartner, 1996; Kiper et al., 2011). Ecotourism cultural impacts consist of positive cultural impacts (e.g., preserving indigenous cultural heritage) and negative cultural impacts (e.g., replacing

indigenous people's values with tourists' cultural values). Indigenous Ecotourism: A type of ecotourism with nature-based attractions; this is developed upon the basis of indigenous values; is possessed by indigenous people; and is interpreted by indigenous people for local natural resources and indigenous culture (Zeppel, 2006).

Organization of the Dissertation

Five chapters are presented in this dissertation. Chapter one, presented above, was the introduction section. It introduced the background, research problem, research purpose, research justification, research conceptual model, hypotheses, delimitations, limitations, and definitions of terms for the study. Next, chapter two is a literature review that discusses the theories associated with this study. The literature review includes ecotourism definitions and elements, principles of indigenous ecotourism and ecotourism, acculturation theories and indicators, and potential cultural impacts of ecotourism development. Chapter three explains the research design and methodology, and consists of an introduction to the study site (e.g., its history, its recreational resources), population and sample, pilot study and pre-test, data collection and procedures, survey instrument development, and data analysis. Chapter four features results and includes a general description of the sample, item analysis and normality test, a test of the measurement model, an assessment of reliability and validity, analysis of the study hypotheses using the SEM analysis, analysis of indirect effects, and analysis of the study hypothesis using the multiple regression analysis. In chapter five, discussions and conclusions including discussion of the findings of the study, conclusions derived from the results, and recommendations for future study in related areas are found.

CHAPTER 2

LITERATURE REVIEW

The literature associated with this study is reviewed in this chapter. This review discusses ecotourism definitions and elements, the principles of ecotourism and indigenous ecotourism, cultural impact, cultural impact analysis, the concept of acculturation and its indicators, and a synthesis of the literature and hypotheses for the study.

Ecotourism Definitions and Elements

Tourism, in the general sense, enables increasing foreign exchange earnings, improving revenues in the tourist sector, and promoting residents' well-being around destinations (Edgell, 2006; Mathieson & Wall, 1992). Nevertheless, oftentimes it also causes a variety of adverse impacts, such as large-scale exploitation and high economic leakage (Dagert, 2001; Khan, 1997). In order to reduce the adverse impacts from tourism (e.g., local residents retain the gains of tourism for their community), ecotourism is often employed as an alternative to tourism (Gartner, 1996).

The term "ecotourism" was first defined as a phenomenon in which tourists travel to natural areas with the motivations of research, appreciation, and enjoyment of the scenery, animals, plants, and local cultures (Beeton, 1998; Caldicott & Fuller, 2005; Jones, 2005). However, there is not yet a consensus on the definition of ecotourism (Caldicott & Fuller, 2005; Clifton & Benson, 2006; Tao *et al.*, 2004). This issue may stem from the fact that ecotourism is not only a term conveying a broad view of meaning (e.g., an activity, a philosophy, and a form of development), but it is also interchangeable with several terms (e.g., sustainable tourism, natural tourism, responsible tourism) (Caldicott & Fuller, 2005;

Swarbrooke, 1999). Thereby, a single and general definition of ecotourism is difficult to embrace (Caldicott & Fuller, 2005).

Numerous definitions of ecotourism have been proposed based on specific research purposes. For instance, Medina (2005), in her ecotourism certification research, defined ecotourism as benefitting local communities. For demand-side research, the emphasis of the definition is placed on tourists' motivations. For example, Swarbrooke (1999) indicated that ecotourism is a type of tourism that attracts tourists with the main motivation of experiencing the natural state of "wildlife" and the "indigenous population." In supply side research, the definitions of ecotourism have four primary elements: 1) contributing to (or funding) the conservation of local natural and cultural resources; 2) promoting local well-being; 3) promoting local empowerment; and 4) increasing the understanding of and respect for local natural resources and culture (Table 2-1).

Wearing *et al.* (2010) indicated that ecotourism is a type of tourism that manifests the characteristics of ecocentrism. Ecocentrism encourages individuals to think beyond the dichotomy between themselves and others and to view nature and the others as a part of themselves (Iso-Ahola, 1980; Rolston, 1992; Wearing *et al.*, 2010). Individuals can learn this ecocentric view when participating in ecotourism to view the nature and culture of an ecotourism site as themselves. Therefore, they might be willing to: 1) conserve the local residents' natural and cultural resources, 2) promote the local well-being, 3) empower the local residents, and 4) increase their understanding of and respect for the local residents' natural resources and culture. Accordingly, the four elements of ecotourism definitions could be justified.

Table 2-1. Primary Elements of the Supply-Side Ecotourism Definitions

Ecotourism Definitions	Ecotourism Elements ^a			
	LRC	LWP	LE	IUR
Ecotourism is purposeful travel to natural areas to understand the culture and natural history of the environment, taking care not to alter the integrity of the ecosystem, while producing economic opportunities that make the conservation of natural resources beneficial to the local people -(Khan, 1997)	●	●	●	●
Ecotourism is constructed around educational visits to areas of particular natural beauty, significant ecological processes, or unique plant and animal communities (Hall & Lew, 1998).				●
Ecotourism is ecologically sustainable tourism with a primary focus on experiencing natural areas that fosters environmental and cultural understanding, appreciation, and conservation (EAA, 2000).	●			●
Ecotourism is a form of nature-based tourism that strives to be ecologically, social-culturally, and economically sustainable while providing opportunities for appreciating and learning about the natural environment or specific elements thereof (Weaver, 2001).	●	●		●
Ecotourism is conceptually defined as a form of tourism taking place in a natural setting, providing environmental education, respecting natural conservation, and maintaining the sustainable management of an integrated environment as its goal (Tao <i>et al.</i> , 2004)	●			●
Ecotourism is a form of tourism that “must benefit local communities” (Medina, 2005).		●	●	
Ecotourism is responsible travel to natural areas that conserves the environment and sustains the well-being of local people (TIES, 2006).	●	●		
According to indigenous ecotourism, the nature-based attractions are developed upon the basis of indigenous values, are possessed by indigenous people, and have indigenous interpretations for local natural resources and indigenous culture (Zeppel, 2006).			●	●

^a Ecotourism elements consist of Local Resource Conservation (LRC), Local Well-Being Promotion (LWP), Local Empowerment (LE), and Increasing Understanding and Respect for Local Natural Resources and Culture (IUR).

The Principles of Ecotourism and Indigenous Ecotourism

Ecotourism is commonly regarded as a tool that facilitates community development (Zeppel, 2006). The International Ecotourism Society (TIES) has indicated that ecotourism is a type of tourism integrating “communities,” “conservation,” and “sustainable travel” (TIES, 2013). In practice, TIES has suggested that conducting ecotourism should be in accordance with the following ecotourism principles (TIES, 2012):

- Minimize its negative impact
- Improve awareness of and respect for culture and environment
- Engage in the provision of positive experiences for tourists and local residents
- Provide funding for conservation
- Improve the incomes and promote empowerment of local residents
- Be perceptive to local political, environmental, and social conditions.

Ecotourism is currently fast growing and spreading into the natural settings of the traditional homelands of indigenous people (Dagert, 2001; TIES, 2012; Zeppel, 2006). Hinch (1998) indicated that indigenous people could be very compatible with ecotourism since indigenous people tend to view themselves and nature as “an integrated whole.” This notion of indigenous people is reflected in the ecocentric view manifested in ecotourism (Hinch, 1998). However, in many cases, conflicts occur for competing the economic and political control of ecotourism industries in indigenous territories (Zeppel, 2006). Meanwhile, the use of indigenous resources often conflicts with determining standards for conservation and sustainable criteria (Hinch, 1998; Robinson, 1999). In order to ease the conflicts of ecotourism, Honey (2007) suggested transferring the economic and political control of ecotourism to the local indigenous residents. Zeppel

(2006) indicated that “negotiating acceptable levels and types of indigenous resource use” is the key to the success of ecotourism development in indigenous territories.

Indigenous ecotourism is a type of ecotourism that allows indigenous people to improve their economic benefits, to control political power, and to determine the forms of indigenous resource use (Ohl-Schacherer et al., 2008; Turner, Berkes, & Turner, 2012; Zeppel, 2006). The term “indigenous ecotourism” started to be used in the mid-1990s and specifically indicates the community-based ecotourism projects developed in indigenous lands (Zeppel, 2006). Indigenous ecotourism often uses indigenous culture as the essence of the attraction (Hinch, 1998). Accordingly, Zeppel (2003, 2006) proposed that indigenous ecotourism should require that the development of attractions is based upon indigenous values, that their ownership belongs to indigenous peoples, and that their interpretations of local natural resources and culture are in accordance with indigenous knowledge. Furthermore, the recommended stages of the development of indigenous ecotourism are 1) the investigation of indigenous peoples for development; 2) the provision of adequate facilities for development; and 3) the use of secure land titles and partnerships between indigenous peoples and operators (Zeppel, 2006).

With regard to the principles of indigenous ecotourism development, Smith (1999) suggested that the essentials of conducting indigenous ecotourism well are: 1) the sustainability of indigenous peoples’ languages, arts, and cultures; 2) enhancing the regaining of indigenous territories; and 3) facilitating the development of indigenous lands and peoples (e.g., reach the goal of self-determination). Turner, Berkes, and Turner (2012), according to the experience of indigenous ecotourism in the Gitga’at Traditional Territory, Canada, suggested that the development of indigenous ecotourism should aim to: 1) minimize related negative impacts; 2) improve indigenous peoples’ benefits and

quality of life; and 3) respect indigenous culture. Zeppel (2006) summarized seven typical principles of indigenous ecotourism, including:

- Its development should be in accordance with indigenous knowledge systems and values
- It should promote the practice of indigenous customs and improve indigenous peoples' quality of life
- It should facilitate the management, usage, and right to recovery of indigenous peoples' traditional land and resources
- It should manage indigenous cultural property, such as cultural heritage and historical sites
- Local indigenous people should actively participate in and control its operation
- Indigenous communities should be integrated into its planning, development, and operation
- Indigenous people should participate in determining the usage of their resources, including people.

Complying with these principles of ecotourism (TIES, 2012) and indigenous ecotourism (Smith, 1999; Turner, Berkes, & Turner, 2012; Zeppel, 2006) is the recommended way to better develop indigenous ecotourism. These principles facilitate the enhancement of positive impacts and the mitigation of negative impacts. Based on these principles, this study developed indicators of indigenous peoples' perceptions of these principles.

Types and Analysis of Cultural Impact

Previous study results have shown that a wide variety of cultural impacts have been caused by ecotourism development in communities and indigenous tribes. Becker and Vanclay (2003) summarized various cultural impacts and divided them into seven categories that contributed to the categorization of ecotourism-induced cultural impacts. Based on the literature review, in regard to ecotourism-induced cultural impacts, the primary types of positive cultural impacts include increasing respect for culture and cultural persistence, improving cultural understanding, and enhancing heritage and value preservation (Beeton, 1998; Clifton & Benson, 2006; Besculides, Lee, & McCormick, 2002; Fotiou, Buhalis, & Vereczi, 2002; Khan, 1997). The primary negative cultural impacts induced from ecotourism consist of cultural change, cultural violation, loss of cultural authenticity, cultural marginalization, anxiety about cultural difference, and language changes (Beeton, 1998; Besculides, Lee, & McCormick, 2002; Chen, 2003; Clifton & Benson, 2006; Gartner, 1996; Khan, 1997; Mathieson & Wall, 1992; Weaver, 1998) (Table 2-2).

Table 2-2. Potential Cultural Impacts of Ecotourism Development

Impact Types	Impact Items
Cultural Change	<u>Negative</u> • Assimilates the traditional culture into the tourist culture (Clifton & Benson, 2006). • Dilutes the traditional culture of the community of local residents (Weaver, 1998). • Residents' traditional values are replaced by tourists' values (Chen, 2003). • Decreases respect for traditional culture (Chen, 2003). • Changes traditional ceremonies (Khan, 1997). • Abandons traditional enterprises (e.g., agriculture) to engage in the ecotourism industry (Chen, 2003; Gartner, 1996).

Table 2-2. (cont'd)

Impact Types	Impact Items
Cultural Violation	<u>Negative</u> • Increases the looting and vandalism of cultural, historic, and religious sites (Besculides, Lee, & McCormick, 2002). • Increases culturally inappropriate dress by tourists (Ryan, 1996). • Causes culturally inappropriate use of alcohol (Clifton & Benson, 2006).
Loss of Cultural Authenticity	<u>Negative</u> • Commercializes the traditional culture (Besculides, Lee, & McCormick, 2002). • Modifies local culture (e.g. culinary tradition) to satisfy tourists' demands (Hipwell, 2007). • The authenticity of local cultural products is undermined by commodification (Cohen, 1988; Beeton, 1998).
Culturally Marginalization	<u>Negative</u> • Induces the resident to become "a marginal man" (Gartner, 1996).
Anxiety about Cultural Difference	<u>Negative</u> • Causes culture shock (Gartner, 1996). • Induces tourists' disagreement with aspects of local culture (e.g., hunting, slash-burn agriculture) (Chen, 2003; Weaver, 1998). • Provokes feelings of tourist resentment (Mathieson & Wall, 1992; Weaver, 1998). • Tourists intrude upon residents' daily life (Chen, 2003). • Increases conflicts between residents (Chen, 2003).
Cultural Respect and Persistence	<u>Positive</u> • Improves the self-esteem and community pride of residents (Beeton, 1998; Clifton & Benson, 2006; Khan, 1997). • Preserves the stories and folklore that have been passed down (Besculides, Lee, & McCormick, 2002). • Incorporates local history, traditions, events, cultures, religions, lifestyles, and values into tourists' experience (Clifton & Benson, 2006; Khan, 1997). • Encourages residents to actively participate in the traditional culture of their community (Clifton & Benson, 2006; Khan, 1997). • Revives the local arts, cultural events, and traditions of the area (Chen, 2003; Clifton & Benson, 2006; Khan, 1997). • Increases residents' financial patronage of cultural and heritage through the revenues of ecotourism (Weaver, 1998). • Provides scholarships to local students through the revenues of ecotourism (Chen, 2003; Hipwell, 2007).

Table 2-2. (cont'd)

Impact Types	Impact Items
Language Change	<u>Negative</u> Decreases the use of traditional languages being spoken among local residents (Besculides, Lee, & McCormick, 2002).
Cultural Understanding	<u>Positive</u> - Increases cultural education and interpretation for visitors (Beeton, 1998; Clifton & Benson, 2006; Fotiou, Buhalis, & Vereczi, 2002). - Enhances residents' ability to understand tourists' culture (Clifton & Benson, 2006). - Encourages residents to re-learn traditional cultures (e.g. traditional nature ethic) (Beeton, 1998; Hipwell, 2007). - Encourages the sharing of cultures and beliefs between residents and tourists (Beeton, 1998). <u>Negative</u> - Imposes a stereotypical interpretation on the local culture (Svoronou, 2005).
Heritage and Value Preservation	<u>Positive</u> - Increases residents' respect for their cultural heritage (Besculides, Lee, & McCormick, 2002). - Facilitates the preservation of the cultural heritage (Besculides, Lee, & McCormick, 2002; Chen, 2003; Gartner, 1996). - Contributes to the management of architecture with traditional features (Besculides, Lee, & McCormick, 2002). <u>Negative</u> - The buildings of the community gradually lose their traditional features (Chen, 2003)

Various studies have attempted to identify cultural impacts. The majority of the available research, such as Environmental Impact Assessment (EIA) studies and Environmental Impact Statements (EIS), focused on finding cultural impacts, often through direct observation and the summarization of secondary data (e.g., the study of Stea and Buge [1980]). Some cultural research has investigated residents' perceptions for identifying tourist-induced cultural impacts. For instance, Besculides, Lee, and McCormick (2002) employed residents' perceptions to estimate the level of cultural impacts from tourism.

With regard to analysis of cultural impacts, social exchange theory has been applied in studying the trade-off between residents' perceptions of different tourism impacts (Andereck *et al.*, 2005; Ap, 1992). Authenticity is the other concept often utilized to study the cultural impact of cultural commoditization. For example, Cohen (1988) adopted the authenticity model of MacCannell (1973) to analyze the relationship between authenticity and commoditization. Nevertheless, the body of literature provides little theoretical basis with which to understand the creation process of cultural impacts, particularly in tourism-related research.

Acculturation is an adequate theory to serve as the theoretical basis to clarify the creation process of the cultural impacts of ecotourism. In the acculturation process, individuals change the culture (e.g., cultural value, belief) that they had possessed (Marín & Gamba, 2003). Gartner (1996) interpreted how cultural impacts occur through acculturation. According to Gartner's interpretation, in a destination, there are three coexisting cultures: 1) the "host culture" that possesses local residents' norms and standards operating in their ordinary lives, 2) the "tourist culture" formed by tourists' behaviors in tourism destinations, and 3) the "residual culture" created by the retention of

the norms and standards of tourists' home cultures (Gartner, 1996). In general, tourists' cultures will become dominant due to tourists' spending time and money more freely, consequently inducing changes in the host culture and causing various cultural impacts through acculturation (Gartner, 1996). Gartner's interpretation highlighted the acculturation process in a tourism destination.

In the application of acculturation theory, Alman (1993) regarded acculturation as an intercultural phenomenon, where cultures are influenced reciprocally, and suggested that acculturation theory is the best framework to understand migrants' responses to the dominant culture. The conceptual framework of acculturation has been utilized in many fields and different types of migration (Funk & Bruun, 2007). Vicarious migration involves intercultural contact, and this phenomenon can be properly examined within the acculturation framework (Funk & Bruun, 2007). Intercultural encounters also occur when tourists enter a tourism destination, which is a type of vicarious migration (Funk & Bruun, 2007). Accordingly, tourism could be studied using the acculturation framework (Funk & Bruun, 2007). For instance, Funk and Bruun's tourism study (2007) found that individuals from dissimilar cultures were more willing to experience and learn from different cultures. Similarly, ecotourism also induces intercultural encounters between tourists and residents; thus, ecotourism could be studied based upon the acculturation framework.

Based on the above literature review, the study utilized the summarized cultural impacts to develop indicators for the estimation of residents' perceived cultural impacts of ecotourism, and employed the acculturation framework to understand the creation process of cultural impacts from ecotourism development.

Acculturation Definition and Concept

Acculturation influences individuals' cultural values and beliefs (Marín & Gamba, 2003). Acculturation occurs when two or more cultures come into contact with each other (Suinn & Khoo, 1992; Schwartz et al., 2010). The American Heritage Dictionary (1985) defines acculturation as “the modification of the culture of a group or individual as a result of contact with a different culture.” The initial concept of acculturation emerged in 1880 in the field of anthropology (Alman, 1993; Berry, 1980; Funk & Bruun, 2007) and has developed as a distinct research field since Redfield, Linton, and Herskovits (1936) provided the classical definition of acculturation in their serial works:

When groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original culture patterns of either or both groups, the acculturation occurs (Redfield, Linton, & Herskovits, 1936, p. 974).

Acculturation, contemporarily, is considered to be a multifaceted phenomenon that is influenced by an individual's different cognitive and behavioral attributes (e.g., beliefs, languages) (Cuellar, Harris, & Jasso, 1980). Currently, an abundance of measurement items (e.g., cultural identities, language usage, music preference) have already been developed for measuring the degree of acculturation (Cuellar, Harris, & Jasso, 1980; Marin & Gamba, 1996; Palmer et al., 2005; Schwartz et al., 2010; Suinn *et al.*, 1992; Yeh, 2003).

Berry (1980) proposed that acculturation occurs at individual and group levels and is a three-phase process consisting of contact, conflict, and adaptation. Contact and adaptation are “necessary” and “inevitable,” while conflict is “probable.” Conflict usually takes place because there is some degree of individual resistance to different cultures.

Adaptation can moderate the conflict between different cultures. The types of adaptation are adjustment, reaction, and withdrawal. In adjustment adaptation, individuals have positive attitudes toward the dominant culture and transfer the features of their native culture in an effort to be more similar to the dominant culture and to diminish conflict. In reaction adaptation, individuals hold negative attitudes toward the dominant culture and make changes to reverse the effects of the dominant culture, such as establishing native political organizations to preserve their own culture. In withdrawal adaptation, individuals retain negative attitudes toward the dominant culture and eventually move away from the culture (Berry, 1980).

Researchers initially considered acculturation to be a unidimensional process in which an individual's native culture is on the one side of and the receiving culture is on the other side of a continuum (Schwartz et al., 2010). Berry (1980, 2003) was the first to introduce four types of acculturation (i.e., assimilation, integration, separation, and marginalization) to illustrate the different ways that individuals relate to their native culture and the dominant culture (i.e., retain native cultural identity, establish a positive relationship to the dominant culture) (Table 2-3). In Berry's four types of acculturation, "assimilation" occurs when individuals abandon their native cultural identity and accept the dominant culture. "Integration" occurs when individuals retain their native cultural identity while moving toward being an integral part of the dominant culture. "Separation" occurs when individuals withdraw from the dominant culture and hold on to their native cultural identity. "Marginalization" occurs when individuals lose their native cultural identity and simultaneously separate from the dominant culture.

Table 2-3. Four Types of Acculturation (Berry, 1980, 2003)

Varieties of Acculturation	Retention of Cultural Identity	Positive Relationship to Dominant Culture
Integration	Yes	Yes
Assimilation	No	Yes
Separation	Yes	No
Marginalization	No	No

Acculturation Indicators

Based on the review of acculturation research, the primary indicators used to estimate respondents' degree of acculturation are: 1) respondents' cultural identities; 2) respondents' belief in the values of their culture; 3) the ethnic pride of respondents; 4) respondents' cultural exposure and interaction (e.g., language usage, heritage exposure, friendship choice); 5) respondents' acculturation motivations toward the dominant culture; and 6) respondents' length of interaction with culture (Alman, 1993; Chen, 2003; Cuellar, Harris, & Jasso, 1980; Garrett & Pichette, 2000; Palmer et al., 2005; Marin & Gamba, 1996; Rezentes, 1993; Schwartz et al., 2010; Suinn *et al.*, 1992; Yeh, 2003).

These six dimensions of acculturation indicators have been widely utilized in acculturation studies and scales. Cuellar, Harris, and Jasso (1980) found that respondents' cultural identities and cultural exposure and interaction (e.g., language usage, music preference, food preference, friends' ethnic groups) influenced respondents' degree of acculturation. Belief in the values of the culture was also adopted to estimate the level of acculturation. For instance, Suinn et al. (1987) used belief as an indicator in their Suinn-Lew Asian Self-Identity Acculturation Scale to measure the level of acculturation for Asian subjects. Ramos-Sanchez and Atkinson (2009) found that if individuals' beliefs in the values of the culture are highly approximate to their beliefs in the values of the dominant culture, they would have high-level acculturation, which influences their choice

of health services. Furthermore, ethnic pride has been adopted to estimate the level of acculturation in several acculturation scales (e.g., Acculturation Rating Scale for Mexican Americans, Suinn-Lew Asian Self-Identity Acculturation Scale). Chen (2003) found that the ecotourism development in Saviki community raised its indigenous residents' ethnic pride. In regard to acculturation motivation, Alman (1993) indicated that individuals with higher levels of acculturation motivations toward the dominant culture had a higher tendency to learn the dominant culture. In regard to length of interaction with culture, Alman (1993) found that individuals with a longer length of interaction with the dominant culture have a tendency to use information (i.e., television advertising) to achieve acculturation.

In short, acculturation theory provides an explanation for the forming of cultural impacts from the intercultural encounters between tourists and residents. Its theoretical framework, with abundant and well-developed indicators, is adequate to be the analysis basis to understand the mechanisms forming the cultural impacts of ecotourism. Based on the literature review, the study employed these acculturation indicators to estimate of the degree of acculturation.

Synthesis of the Literature and Hypotheses

The study has developed the conceptual research model (Figure 1-1) based on the literature review of acculturation theories and indicators (Alman, 1993; Chen, 2003; Cuellar, Harris, & Jasso, 1980; Garrett & Pichette, 2000; Palmer et al., 2005; Marin & Gamba, 1996; Rezentes, 1993; Schwartz et al., 2010; Suinn *et al.*, 1992; Yeh, 2003), ecotourism notions and impacts (Beeton, 1998; Besculides, Lee, & McCormick, 2002; Chen, 2003; Clifton & Benson, 2006; Gartner, 1996; Khan, 1997; Medina, 2005; Mathieson & Wall, 1992; Weaver, 1998; Zeppel, 2006), and principles of indigenous ecotourism and ecotourism (Smith, 1999; TIES, 2012; Turner, Berkes, & Turner, 2012; Zeppel, 2006). Accordingly, four general research hypotheses that consisted of ten specific sub-hypotheses (i.e., ten null hypotheses) were examined.

In the literature review, acculturation occurs when at least two or more cultures come in contact with each other, which induces succeeding changes in one or all cultures (Berry, 1980; Redfield, Linton, & Herskovits, 1936; Schwartz et al., 2010; Suinn & Khoo, 1992). In a given destination, there are three coexisting cultures (i.e., the host culture, tourist culture, and residual culture) (Gartner, 1996). Acculturation occurs when these cultures interact with each other. In the acculturation process, the tourist culture will generally become dominant, owing to tourists' spending time and money more freely (Gartner, 1996). Meanwhile, acculturation induces changes in the host culture and causes various cultural impacts (Gartner, 1996). Accordingly, residents with higher degrees of acculturation may affect the degree of their perceived cultural impacts. However, little research has been done in this field yet. In order to clarify the relationship between residents' degrees of acculturation and their perceived cultural impacts, this study hypothesizes (as null tests):

Hypothesis 1. Residents' acculturation does not affect their perceived cultural impact.

1-a. Residents' acculturation of their cultural self-identification does not negatively affect the residents' perceived positive cultural impact.

1-b. Residents' acculturation of their personal cultural exposure and interaction does not positively affect the residents' perceived positive cultural impact.

1-c. Residents' acculturation of their cultural self-identification does not positively affect the residents' perceived negative cultural impact.

1-d. Residents' acculturation of their personal cultural exposure and interaction does not negatively affect the residents' perceived negative cultural impact.

Ecotourism is often regarded as a tool that facilitates community development (Zeppel, 2006). The International Ecotourism Society (2012) has proposed seven principles to enhance positive impacts and mitigate negative impacts in ecotourism development. Several researchers recommended principles of indigenous ecotourism to maximize positive impacts and minimize negative impacts for indigenous peoples (Smith, 1999; Turner, Berkes, & Turner, 2012; Zeppel, 2006). Accordingly, ecotourism development complying with these principles is assumed to be capable of raising positive and diminishing negative impacts on communities and indigenous tribes. Hence, this study hypothesizes (as null tests):

Hypothesis 2. Residents' perception of ecotourism development that conforms to indigenous ecotourism and ecotourism principles does not affect the residents' perceived cultural impact.

2-a. Residents' perceived ecotourism development that conforms to indigenous ecotourism and ecotourism principles does not positively affect the residents' perceived

positive cultural impact.

2-b. Residents' perceived ecotourism development that conforms to indigenous ecotourism and ecotourism principles does not negatively affect the residents' perceived negative cultural impact.

Acculturation induces changes in the host culture and causes various cultural impacts (Gartner, 1996). Nevertheless, few studies have provided the interpretation for the effect of acculturation on the degree of ecotourism development that conforms to indigenous ecotourism and ecotourism principles. In order to better understand their relationships, this study hypothesizes (as null tests):

Hypothesis 3. Residents' acculturation does not affect their perception of ecotourism development that conforms to indigenous ecotourism and ecotourism principles.

3-a. Residents' acculturation of their cultural self-identification does not negatively affect the residents' perceived ecotourism development that conforms to indigenous ecotourism and ecotourism principles.

3-b. Residents' acculturation of their personal cultural exposure and interaction does not positively affect the residents' perceived degree of ecotourism development that conforms to indigenous ecotourism and ecotourism principles.

In regard to acculturation indicators, numerous indicators have been developed to assess the degree of acculturation (Alman, 1993; Chen, 2003; Cuellar, Harris, & Jasso, 1980; Garrett & Pichette, 2000; Palmer et al., 2005; Marin & Gamba, 1996; Rezentes, 1993; Schwartz et al., 2010; Suinn *et al.*, 1992; Yeh, 2003). However, few studies have verified whether these acculturation indicators well reflect the definition of acculturation. In order to verify it, the study examined the relationships between the indicators of the definitions of two types of acculturation (i.e., an assimilation-related indicator, an

integration-related indicator) and acculturation indicators. Hence, this study hypothesizes (as null tests):

Hypothesis 4. Acculturation indicators are unrelated to two levels of acculturation – assimilation and integration.

4-a. The indicators of acculturation are not positively related to the indicator of the definition of assimilation.

4-b. The indicators of acculturation are not positively related to the indicator of the definition of integration.

CHAPTER 3

METHODS

This study attempted to better understand the ecotourism acculturation mechanisms and the reflection of the acculturation definition on acculturation indicators. This chapter discusses the research design and methodology of the study, which consisted of study site, recreational resources and ecotourism cultural impacts in the Saviki community, population and sample, data collection and procedures, survey measurement development, and data analysis methods.

Methodological Specification of the Study

Study Site

This study mainly estimated residents' attitudes toward their culture (i.e., residents' degree of acculturation), the cultural impacts of ecotourism (the degree of the residents' perceived positive and negative cultural impact of ecotourism development), and ecotourism (residents' perceived degree of ecotourism development that conforms to indigenous ecotourism and ecotourism principles); subsequently, it examined the relationships among them. Hence, the appropriate study site should have the attributes of "currently operating ecotourism" and "existing cultural impacts from ecotourism."

Saviki Community, with a population of more than ninety percent Tsou people, is one of the representative sites of operating ecotourism in Taiwan. In the last decade, the Saviki community has averaged about 98,000 tourists per month from ecotourism. Previous research has shown that ecotourism has induced multiple impacts on the culture of the Tsou community (e.g., the daily life of local residents is intruded upon by tourists)

(Chen, 2003). Accordingly, the Saviki community is an adequate study site from which to collect data for the analysis of residents' attitudes about residents' degrees of acculturation, residents' perceived degree of ecotourism development that conforms to indigenous ecotourism and ecotourism principles, and residents' perceived cultural impact (i.e., positive and negative cultural impact) of ecotourism development.

The study site of the Saviki community, located in south-central Taiwan, is a Tsou tribe community in Alishan Township. This community is a popular and well-known destination for indigenous ecotourism in Taiwan (Hipwell, 2007). The community, with an area of about 4.5 square miles, is 30 miles (48 kilometers) from Chiayi City (Liang, 2005). The community became famous in 1989 when it made the first indigenous people's preservation action in Taiwan to protect the fishes in the Danayigu River (Chen, 2003; Liang, 2005). After the nationally known fish preservation action, Saviki Community established Danayigu Natural Ecological Park in 1995 and began to operate ecotourism (Chen, 2003). The entrance ticket to Danayigu Natural Ecological Park currently costs about \$3 U. S. dollars.

Between 1895 and 1945, the residents of Saviki Community mainly cultivated glutinous rice, makino bamboos, tung trees, and castor-oil plants and logged camphor trees (ANSAA, 2009). In the 1980s, many residents cultivated tea trees and arecas (ANSAA, 2009). The residents began to develop ecotourism in 1995. Currently, the residents cultivate tea trees, bamboos, arecas, vegetables, and pineapples; hunt animals; produce handicrafts; and operate ecotourism (ANSAA, 2009). All local industries are operated by the local residents of Saviki Community.

History of Saviki Community

The following introduces the history of Saviki Community according to the Alishan National Scenic Area Administration (ANSAA) report of 2009. It is said that a Kuba, a gathering hall of the Tsou people, was established 3,000 years ago in the location of Saviki Community. The meaning of the word “Saviki” is “a picturesque place.” About 200 years ago, some Tsou people, mostly the An and Du families, moved to this location and began to develop it as a tribe. Afterward, they left the tribe because of pestilence. Between 1895 and 1945, many Tsou people moved back to this location and developed it as a tribe once more for the logging of camphor trees (ANSAA, 2009).

In 1985, the residents of Saviki Community started to plan for the development of the tourism industry in the community. They subsequently established a committee for tourism development and inventoried the recreational resources of the community. In 1988, the residents decided to promote ecological preservation and cultural reconstruction for their community. In 1989, eighty percent of the residents of the community supported the preservation action for protecting the fishes in the Danayigu River. In the same year, the residents held the Danayigu Autonomous Convention, which identified the closed fishing area of the Danayigu River as a conservation area to protect *Onychostoma barbatula*, the fish species of the river. In 1990, seventy-five young residents participated in the act of patrolling this conservation area (ANSAA, 2009).

In 1992, Saviki Community won the Models of the Ecological Conservation Award from the Council of Agriculture, Executive Yuan. In 1993, the Chiayi county government decided to provide 200,000 NT dollars per year to Saviki Community for conserving its local resources and constructing its public facilities. In the same year, the valley of Danayigu was opened to tourists. In 1994, the Shanmei (Saviki) Community

Development Association was established to develop the community. In 1995, the Danayigu Natural Ecological Park was established with an entrance fee of 80 NT dollars per person (ANSAA, 2009).

In 1996, Saviki Community won the National Evaluated Premium Community award and held the first festival of the *Onychostoma barbatula*. In 1997, Saviki Community won the Group Promoting the Development of Aboriginal People award from the Council of Indigenous Peoples, Executive Yuan. In 1998, Saviki Community won the Community Development Award of Taiwan Province and the Top Ten Environmental Protection Communities Award. In 2002, Saviki Community won the Yushan Prize of the President's Cultural Awards (ANSAA, 2009). There were 3,711 to 35,000 tourists per month from 2002 to 2009 in Saviki Community.

Beginning August 8, 2009, Saviki Community closed its recreational facilities and Danayigu Natural Ecological Park for flood restoration (ANSAA, 2009). The community did not allow tourists to enter during the restoration. After 18 months, Saviki Community reopened to tourists on February 26, 2011. Afterward there were 960 to 12,571 tourists per month from March 2011 to May 2013 (Table 3-1).

Recreational Resources of Saviki Community

Saviki Community is abundant in recreational resources, including 166 types of plants (e.g., flowers, ferns, bamboos, vines), 122 types of animals (e.g., butterflies, birds, fishes, shrimp, tree frogs), the Danayigu Natural Ecological Park, Tsou cultural resources, and recreational facilities. The following introduces its recreational resources according to the ANSAA report (2009).

Danayigu Natural Ecological Park was established in 1995 and is located in

Danayigu in the valley of the Danayigu River. Danayigu used to be a holy ground where people were forbidden to kill any life. This park has fish-watching zones and holds shows of Tsou songs and dances at 10:40 a.m., 13:50 p.m., and 15:30 p.m. There are four restaurants in the park: the Akuei Local Flavor Restaurant, Passuya Restaurant, Hsiangchulin Restaurant, and Chiachia Snake Bar can accommodate 250, 20, 300, and 50 tourists respectively (ANSAA, 2009). In 2013, Danayigu Natural Ecological Park continues to provide the shows of Tsou songs and dances to tourists, allows tourists to visit the valley of the Danayigu River, and has several restaurants in the park.

The first neighborhood has a Tsou name, Cacaya, which means “an outpost station.” In this neighborhood, the Cheg-Min An Workshop makes and sells bamboo vases and calabash decorations. The Yupasu Restaurant can accommodate 70 tourists (ANSAA, 2009). In 2013, the Yupasu Shop was the most popular shop; it provides Tsou food, agricultural products, Tsou crafts, and teas for visitors.

The Tsou name of the second neighborhood is Yamakayua, which was the name of the Tsou people in Saviki Community. There is a traditional Tsou house of the An family in this neighborhood (ANSAA, 2009). Tamayeana, meaning “cricket,” is the Tsou name of the third and fourth neighborhoods. In the fourth neighborhood, the Cinkungfang Workshop makes and sells carved leather goods and traditional costumes. The Yikuyachu Inn can lodge 50 tourists, and the Yikuyachu Restaurant can accommodate 70 tourists. Yabasauni is a male’s name, and it is the Tsou name of the fifth neighborhood. In this neighborhood, tourists can catch shrimp in the river and watch the behaviors of nocturnal animals at night. There is a traditional Tsou house of the Chuang family in this neighborhood (ANSAA, 2009). In 2013, a new breakfast restaurant was established in the fourth neighborhood.

Baayai used to be the Tsou name of the sixth and seventh neighborhoods. A baayai is a stone poked by pestles to make Tsou music. Now, the Tsou names of the sixth and seventh neighborhoods are Baayai and Payai respectively. In the sixth neighborhood, residents have designed their neighborhood as a zone of natural butterfly scenery with many types of butterflies. In this neighborhood, the Shanchihmei Inn, Hsiangchulin Inn, and Yangmama Inn can lodge 112, 20, and 10 tourists respectively. The Binbin Campground can lodge 20 four-person family tents. The Shanchihmei Restaurant and Tsouchuwu Restaurant both can accommodate 250 tourists. In the seventh neighborhood, hunting culture is still prevalent (ANSAA, 2009).

Ecotourism Cultural Impacts in Saviki Community

There are abundant cultural resources in Saviki Community, such as traditional Tsou houses, shows of Tsou songs and dances, Tsou-style restaurants, Tsou-style homespun products, and Tsou-style handmade crafts (ANSAA, 2009). The Taiwanese government currently makes a great effort to promote cultural and creative industries, which encourage the development of cultural products and services (Council of Cultural Affairs, 2012). The Saviki community also endeavors to develop cultural industries of ecotourism, including cultural products and services for tourists (Frontier Foundation, 2012). This development may induce desired or undesired cultural impacts.

Chen (2003) found that several types of cultural impacts have occurred in Saviki Community, including:

- Residents' traditional values are replaced by tourists' values
- Decreased respect for traditional cultural (i.e., Tsou culture)

- Increasingly tense atmosphere, since tourists do not respect the customs and habits of local residents
- The daily life of local residents is intruded upon by tourists
- Increased conflicts between residents and tourists
- Facilitating the preservation of the cultural heritage
- Enhanced team spirit in the community
- Enhanced self-esteem of the residents of the community
- Preservation and inheritance of local traditional crafts and cultural activities.

Flood Restoration of Saviki Community and Reopening for Ecotourism

A flood caused serious destruction to Saviki Community on August 8, 2009. The Shanmei Bridge, four suspension bridges, the Binbin Campground, and the Danayigu Natural Ecological Park were destroyed by the flood. In the Danayigu Natural Ecological Park, fish-watching zones and several recreational facilities (i.e., four pavilions, a rest room, and a cold spring area) were destroyed. On the same day, Saviki Community closed the Danayigu Natural Ecological Park and the recreational facilities for flood restoration. During the flood restoration, tourists were not allowed to enter the community. On February 26, 2011, Saviki Community reopened for ecotourism.

The Saviki community has averaged about 12,684 tourists per month from ecotourism in the last decade. Before the flood, the number of tourists was between 3,711 and 35,000 tourists per month. After flood restoration, the number of tourists was between 960 and 12,571 tourists per month from March 2011 to May 2013 (Table 3-1).

Table 3-1. Number of Tourists Per Month in Saviki Community

Y \ M	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
2013	2,102	5,337	12,571	5,334	4,029	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2012	4,063	3,222	5,220	5,405	3,227	2,673	6,490	960	2,916	6,282	4,483	4,510	49,451
2011	0	0	2,098	4,689	1,738	2,300	4,990	2,251	2,429	6,031	5,759	10,288	42,573
2010	0	0	0	0	0	0	0	0	0	0	0	0	0
2009	14,208	6,923	9,842	10,926	14,199	6,126	13,748	2,780	0	0	0	0	78,752
2008	4,136	7,414	9,294	12,628	11,357	7,814	14,224	15,851	4,138	9,377	9,211	6,137	111,581
2007	9,441	13,048	8,126	9,179	6,761	7,069	16,896	5,569	7,482	6,721	8,463	6,700	105,455
2006	13,620	19,172	19,884	24,776	14,829	6,170	12,798	17,245	11,974	17,608	12,201	9,080	179,357
2005	9,559	16,843	11,522	19,191	14,682	8,881	23,835	13,924	6,834	17,490	18,924	16,942	178,627
2004	17,278	12,099	20,890	22,745	27,179	22,661	5,797	13,685	3,711	13,927	14,893	12,611	187,476
2003	13,472	33,974	28,356	17,390	10,069	4,213	15,467	17,288	14,540	23,795	20,345	14,876	213,785
2002	11,630	27,048	35,000	25,500	16,200	15,972	24,500	27,000	19,482	20,275	29,069	23,735	275,411

Source: Alishan National Scenic Area Administration (2012, 2013)

As of 2013, all of the participants of ecotourism are members of the Tsou people except the members of the family of one store in the third neighborhood; they are not members of the Tsou people. In general, seventy-five percent of the income from the ecotourism of the Saviki Community Development Association was distributed to the seven neighborhoods (mainly for renewing the facilities in each neighborhood), and twenty-five percent of the income was paid to the employees who work in ecotourism as salaries.

Population and Sample

In the last 27 years, the population growth in Saviki Community has been stable. More than ninety percent of its residents have been Tsou people (Chung, 2002). From 1987 to 2013, its population increased by seven residents (Table 3-2). In 2013, the population of the community was 626, with 330 males and 269 females (Alishan Township Household Registration Office, 2011, 2013) (Table 3-3). In 2013, the Saviki community had 347 adult residents (i.e., 20 years old and over) who were living in the community. The adult residents who live in Saviki Community were selected as the target population and samples of this study.

Table 3-2. Population of Saviki Community

Year	Number of Neighborhoods	Number of Households	Males	Females	Total
2013	7	185	330	296	626
2012	7	214	370	335	705
2011	7	209	373	341	714
2010	7	211	371	338	709
2009	7	208	370	338	708
2008	7	198	367	335	702
2007	7	195	358	330	688
2006	7	187	345	320	665
2005	7	190	345	317	662
2004	7	185	341	323	664
2003	7	181	340	311	651
2002	7	176	338	305	643
2001	7	176	332	293	625
2000	7	180	331	295	626
1999	7	166	327	283	610
1998	7	155	333	286	619
1997	7	156	337	298	635
1996	7	144	346	293	639

Source: Alishan Township Household Registration Office (2011, 2013)

Table 3-2 (cont'd)

Year	Number of Neighborhoods	Number of Households	Males	Females	Total
1995	7	140	341	280	621
1994	7	131	325	269	594
1993	7	129	323	264	587
1992	7	124	321	272	593
1991	7	121	321	282	603
1990	7	122	324	293	617
1989	7	117	323	305	628
1988	7	117	322	300	622
1987	7	115	318	301	619

Source: Alishan Township Household Registration Office (2011, 2013)

Table 3-3. Adult Population Living in Saviki Community in 2013

Number of Neighborhoods	Males	Females	Number of Adults
7	188	159	347

Source: The survey of this study

Data Collection and Procedures

In keeping with the research purpose and previous studies of acculturation (Alman, 1993; Cuellar, Harris, & Jasso, 1980; Garrett & Pichette, 2000; Palmer et al., 2005; Marin & Gamba, 1996; Rezentes, 1993; Schwartz et al., 2010; Suinn *et al.*, 1992; Yeh, 2003), ecotourism impacts (Beeton, 1998; Besculides, Lee, & McCormick, 2002; Chen, 2003; Clifton & Benson, 2006; Gartner, 1996; Khan, 1997; Mathieson & Wall, 1992), and principles of indigenous ecotourism and ecotourism (Smith, 1999; TIES, 2012; Turner, Berkes, & Turner, 2012; Zeppel, 2006), the study employed a quantitative approach and used survey research methods to conduct data collection. Two self-administered questionnaires (the Cultural Impact Survey and Saviki Community Ecotourism Survey) were designed for data collection with a multi-step approach. This approach includes: 1) developing and translating the two questionnaires based upon the examples of previous literature, 2) modifying the two questionnaires according to committee members' comments, and 3) reflecting the feedback of the pilot study and pre-test on the revised questionnaire of the Saviki Community Ecotourism Survey. Both of the questionnaires were reviewed and approved by the Institutional Review Board (IRB) of Michigan State University.

Pilot Study

The pilot study was conducted before the pre-test and main survey to determine which cultural impacts would be adopted in the study. The pilot study executed the Cultural Impact Survey, and requested that 49 adult residents who are living in the Saviki community report on the five most important negative and positive cultural impacts from ecotourism development in the community.

Purposive sampling was utilized in the survey. In order to have a more purposive sample, the survey was mainly distributed to the participators in ecotourism in the seven neighborhoods of the community because the residents who are working in the ecotourism industry are more likely to have contact with tourists and to feel the impacts of ecotourism in their community.

The investigator selected 49 adult residents as the respondents for the Cultural Impact Survey (the 49 respondents were also selected for the main survey). These respondents were asked to answer the Chinese version of the survey. The five most important negative and positive cultural impacts reported were adopted as the items for the Saviki Community Ecotourism Survey that was conducted in the pre-test and main survey.

The pilot study survey was conducted with a ninety-eight percent response rate in the Saviki community from November 29 through December 7 of 2012. A total of 49 questionnaires were delivered. Forty-eight questionnaires were completed and collected. In the completed surveys, ten questionnaires were found to be invalid because participants: 1) didn't rank the cultural impacts; 2) ranked the cultural impacts by the order of the impacts shown in the questionnaires; and 3) rated every cultural impact. The results of the survey showed the rankings of positive and negative cultural impacts of ecotourism in Saviki community (Table 3-4 and 3-5).

Table 3-4. Positive Cultural Impacts of Ecotourism in Saviki Community

Ranking	Positive Cultural Impacts	Score ^a	Percentage ^b
1	Tsou cultural heritage has been preserved.	91	63%
2	Local cultural activities have been preserved and inherited (e.g., Taiwan Ku Fish Festival).	79	61%
3	Local traditional crafts have been preserved and inherited.	65	61%
4	The team spirit of the community has been enhanced.	60	47%
5	Local residents have learned more about Tsou culture.	59	53%
6	Respect for Tsou culture has increased.	56	50%
7	The sharing of cultures and beliefs between residents and tourists has been encouraged.	54	47%
8	The education and interpretation of Tsou culture for tourists have increased.	38	39%
9	The amount of Tsou language being spoken among local residents has increased.	28	29%
10	The self-esteem of the residents of the community has been enhanced.	20	24%
11	Tsou people's values of forest protection and ecological conservation have been inherited.	5	3%
12	Local industries have been increasingly developed; residents' incomes have grown; local employment opportunities have increased.	3	3%

^a The sum of the scores that have a score of five in a respondent's rank of one (the most important impact), and have a score of one in a respondent's rank of five (the fifth-most important impact).

^b The percentage of the respondents who had selected this item as one of the five most important positive cultural impacts

Table 3-5. Negative Cultural Impacts of Ecotourism in Saviki Community

Ranking	Negative Cultural Impacts	Score ^a	Percentage ^b
1	Tsou people's values have been replaced by tourists' cultural values.	96	63%
2	Tsou culture has been modified to satisfy tourists' demands.	85	66%
3	There has been an increasingly tense atmosphere, since tourists do not respect the customs and habits of local residents.	55	45%
4	The amount of Tsou language being spoken among local residents has decreased.	52	47%
5	The local culture demonstrated to tourists has been different than the authentic Tsou culture.	46	34%
6	Respect for Tsou culture has decreased.	45	37%
7	The buildings of the community have gradually lost Tsou traditional features.	44	37%
8	The daily life of local residents has been intruded upon by tourists.	35	32%
9	Tsou's traditional ceremonies have changed.	27	29%
10	Conflicts between local residents and tourists have increased.	10	13%
11	Residents' values have been changed.	4	3%
11	Environmental pollution has increased.	4	3%
13	The community cohesion of residents has been changed.	3	3%
14	The protection of native plants has decreased.	2	3%
14	Residents have increasingly depended upon incomes from tourism with seasonal changes.	2	3%
16	The demonstration of local culture is still superficial	1	3%

^a The sum of the scores which have a score of five in a respondent's rank of one (the most important impact), and have a score of one in a respondent's rank of five (the fifth-most important impact).

^b The percentage of the respondents who had selected this item as one of the five most important positive cultural impacts.

Pre-Test

After the pilot study, the pre-test (n=15) was executed to receive feedback for modifying the survey instruments to ensure their reliability and validity. The initial survey instruments of the Saviki Community Ecotourism Survey were distributed to

dissertation committee members to obtain feedback and comments. The survey was also distributed to fifteen of the Tsou people living around the Saviki community (i.e., the Sinmei village) to test and receive feedback for revising and developing the instruments. The test results and comments were helpful when revising the survey instruments; as a result, they are suitable and readable for Tsou people.

The pre-test survey was conducted with a 100% response rate in the Sinmei community on December 16, 2012. A total of 15 questionnaires were delivered, completed, and collected. The results of the survey showed respondents' comments about the survey. The respondents finished the survey in five to nineteen minutes. Several respondents suggested that revising question ten to be "how important is it to you not to become Plain People?" and question nine to be "how important is it to you to become the Plain people?" Some respondents expressed that they did not like the wording of questions nine and ten, because asking about a Tsou people's attitudes toward becoming a Plain people (i.e., the term that indigenous people calls non-indigenous people in Taiwan) was offense to Tsou people.

The results of the pre-test survey were employed in the revised works of the questionnaire of the main survey to ensure that the respondents of the Tsou people fully understood the questions of the main survey.

Main Survey

The main survey conducted was the Saviki Community Ecotourism Survey. The 347 adult residents (i.e., 20 years old and over) who live in Saviki Community were selected as the target population and sample for the main survey. Information about the sample frame was obtained from the Alishan Township Household Registration Office and the

Saviki (Sinmei) Village Office. Before the survey procedure, the investigator presented the proposal of the study to the residents and requested the approval and support of the Saviki (Sinmei) Village Office for conducting the survey in the Saviki community.

During the survey process, the investigator wore an I.D. badge to indicate that he was the investigator of the survey. The investigator visited the households of the target respondents according to house number in each neighborhood. First, the investigator briefly introduced the purpose of the survey and indicated that only adult residents (i.e., 20 years old and over) living in the community could respond, which was also emphasized in the cover letter for the questionnaire. After the introduction, the investigator handed the Chinese version of the self-administered questionnaires to the target respondents and ascertained the appropriate time (completing the questionnaires within one day was encouraged) to pick up the questionnaires from the respondents. Afterward, the investigator returned to the households to pick up the questionnaires.

During the distribution and collection process, the investigator assisted the respondents in understanding the meaning and format of the questions when the respondents had problems with them. The investigator asked two of the Tsou people to explain the meaning of the questionnaire's questions for the respondents of two families whose members had difficulty understanding Chinese. When some target respondents were not at home for the first attempted questionnaire delivery, the investigator left the questionnaires with another member of the household for delivery to the target respondents. After visiting the households of the target respondents three times unsuccessfully, questionnaires with waterproof bags were adhered to the doors of eight respondents, and questionnaires were subsequently retrieved. A lottery to win a bag of rice was utilized as an incentive to motivate participants to complete the questionnaire.

Twelve respondents won a bag of rice after the lottery draw was done by Mayor Shin-Yi Chuang of the Saviki village.

The main survey was conducted with a response rate of over ninety-two percent (i.e., 92.5%) in the Saviki community from December 28, 2012 to January 21, 2013. A total of 347 questionnaires were delivered. Of those, 321 questionnaires were collected (Table 3-6). In the collected surveys, 320 questionnaires were fully completed, and one questionnaire was the fifty percent completed. Fifteen residents (4.32%) refused to participate in the survey. Eleven residents (3.17%) did not return the questionnaires after several attempts to contact the household.

Table 3-6. Returned Questionnaires in Administration Dates of the Main Survey
from December 28, 2012 to January 21, 2013

					Fri 12/28	Sat 12/29
					16	22
Sun 12/30	Mon 12/31	Tue 1/1	Wed 1/2	Thu 1/3	Fri 1/4	Sat 1/5
34	19	20		22	22	5
Sun 1/6	Mon 1/7	Tue 1/8	Wed 1/9	Thu 1/10	Fri 1/11	Sat 1/12
31	34	3	12	16		8
Sun 1/13	Mon 1/14	Tue 1/15	Wed 1/16	Thu 1/17	Fri 1/18	Sat 1/19
14	10	4	8	2	8	4
Sun 1/20	Mon 1/21					
4	3					

Survey Measurement Development

The indicators of the survey measurement were developed based on the literature review and comments and feedback from the pilot study and pre-test. Three constructs were developed to estimate residents' degree of acculturation according to the review of different acculturation research and scales (Alman, 1993; Cuellar, Harris, & Jasso, 1980; Garrett & Pichette, 2000; Kang, 2006; Marin & Gamba, 1996; Suinn *et al.*, 1992), and the feedback from the pre-test. The construct of cultural self-identification included three indicators (i.e., ethnic identity, belief in Tsou values, ethnic pride). The construct of personal cultural exposure and interaction consisted of five indicators (i.e., language usage, music preference, food preference, participation in Tsou ceremonies, friends' ethnic groups). Furthermore, two indicators of the definitions of the degree of acculturation (i.e., to what extent would you say you have adapted to the Plain people's culture, to what extent would you say you have become like the Plain people) were developed based on the literature review (Berry, 1980, 2003; Deng & Walker, 2007; Manrai & Manrai, 1995).

There was one construct of perceived conformity to the principles of indigenous ecotourism and ecotourism that was developed with eleven indicators based on the review of the principles of indigenous ecotourism and ecotourism (Smith, 1999; TIES, 2012; Turner, Berkes, and Turner, 2012; Zeppel, 2006). These eleven indicators were developed to estimate residents' perceived degree of ecotourism development that conforms to indigenous ecotourism and ecotourism principles. Aside from this, two constructs of perceived cultural impacts of ecotourism (i.e., perceived positive and negative impacts) with twenty indicators were developed based on the literature review (Beeton, 1998; Besculides, Lee, & McCormick, 2002; Chen, 2003; Cheng, 2004; Clifton

& Benson, 2006; Fotiou, Buhalis, & Vereczi, 2002; Gartner, 1996; Khan, 1997; Weaver, 1998) and comments and feedback from the pilot study and pre-test. These twenty indicators were developed to estimate residents' perceived degree of positive and negative cultural impacts from ecotourism development. These constructs and indicators referring to degree of acculturation, perceived cultural impacts, and principles of indigenous ecotourism and ecotourism are summarized in Table 3-7 and Table 3-8.

Table 3-7. Survey Measurement Items of Acculturation Constructs

Construct & Variable	Measurement Item Selected Inclusion	Source and Original Item
Cultural Identities and Values	- How do you identify yourself? - Rate yourself on how much you believe in the values of the Tsou people (e.g., Tsou people's culture of sharing)	<u>Cuellar, Harris, & Jasso (1980)</u> "How do you identify yourself?"^a <u>Suinn <i>et al.</i>, (1992)</u> "How do you identify yourself?"^a <u>Garrett & Pichette (2000)</u> "How would you rate yourself?"^a <u>Suinn <i>et al.</i>, (1992)</u> "Rate yourself on how much you believe in Asian values (e.g., about marriage, families, education, work)." "Rate yourself on how much you believe in American (Western) values."^a
Ethnic Pride	As a member of Saviki Community, how much pride do you have in the Tsou people?	<u>Suinn <i>et al.</i>, (1992)</u> "If you consider yourself a member of the Asian group, how much pride do you have in this group?"^a <u>Garrett & Pichette, (2000)</u> "How much pride do you have in Native American culture and heritage?"^a

^a The items were selected because they were appropriate to the circumstances of the research site.

Table 3-7 (cont'd)

Construct & Variable	Measurement Item Selected Inclusion	Source and Original Item
Cultural Exposure & Interaction	<u>Language Usage</u> . Which language, Tsou language or Chinese, do you speak better?	<u>Language Usage</u> <u>Cuellar, Harris, & Jasso (1980)</u> “What language do you speak?” ^a <u>Suinn et al. (1992)</u> “What language can you speak?” ^a <u>Kang (2006)</u> “How well do you speak/read/write English?” ^a <u>Marin & Gamba, 1996</u> “How well do you speak English?” ^a
	<u>Heritage Exposure</u> . What is your music preference? . What is your food preference? . Do you participate in Tsou occasions (e.g., Millet Ceremony, Taiwan Ku Fish Festival)?	<u>Heritage Exposure</u> <u>Suinn et al. (1992)</u> “What is your music preference?” ^a “What is your food preference at home?” ^a “What is your food preference in restaurants?” ^a “Do you participate in Asian occasions, holidays, traditions, etc?” ^a
Cultural Exposure & Interaction	<u>Friendship Choice</u> . What was the ethnic origin of the friends and peers you had?	<u>Friendship Choice</u> <u>Cuellar, Harris, & Jasso (1980)</u> “What was the ethnic origin of the friends and peers you had as a child up to age 6” ^a “What was the ethnic origin of the friends and peers you had as a child from age 6 to 18?” ^a <u>Suinn et al. (1992)</u> “What was the ethnic origin of the friends and peers you had as a child up to age 6” ^a “What was the ethnic origin of the friends and peers you had as a child from 6 to 18?” ^a

^a The items were selected because they were appropriate to the circumstances of the research site.

Table 3-7 (cont'd)

Construct & Variable	Measurement Item Selected Inclusion	Source and Original Item
Acculturation Motivation	. How important is it to you to become a member of the Plain people? . How important is it to you to avoid becoming a member of the Plain people?	<u>Alman (1993)</u> "How important is it to you to become part of the dominant American culture?" ^a
The Indicators of the Definitions of the Degree of Acculturation	. To what extent would you say you have adapted to the Plain people's culture? . To what extent would you say you have become like the Plain people?	<u>Berry (1980, 2003)</u> "Assimilation" occurs when individuals abandon their native cultural identity and accept the dominant culture." ^a "Integration" occurs when individuals retain their native cultural identity while moving toward being an integral part of the dominant culture." ^a <u>Manrai & Manrai (1995)</u> "How far have respondents felt that they had integrated into the culture of the United States?" ^a <u>Deng & Walker (2007)</u> "Acculturation and assimilation are often used interchangeably in the literature." ^a <u>Deng & Walker (2007)</u> Assimilation is the "terminal stop" and "perfect form" of acculturation. ^a

^a The items were selected because they were appropriate to the circumstances of the research site.

Table 3-7 (cont'd)

Construct & Variable	Measurement Item Selected Inclusion	Source and Original Item
Acculturation Attitudes	- Is it important to learn Plain people's culture? - Do you wish to keep the identity of the Tsou people?	<u>Berry (1980)</u> "Are positive relations with the dominant society to be sought?"^a "Is my cultural identity of value to be retained?"^a <u>Berry et al. (1987)</u> "Is it considered to be of value to maintain relationships with other groups?"^a "Is it considered to be of value to maintain cultural identity and characteristics?"^a <u>Ward (2008)</u> "Is it important to engage in intercultural contact with other groups, including members of the dominant culture?"^a "Is it important to maintain my cultural heritage?"^a

^a The items were selected because they were appropriate to the circumstances of the research site.

Table 3-8. Survey Measurement Items of Ecotourism Principles and Cultural Impacts

Indigenous Ecotourism Principles		
Construct & Variable	Measurement Item Selected Inclusion	Source and Original Item
Principles of Indigenous Ecotourism & Ecotourism	. The community's ecotourism has been developed in accordance with Tsou culture and values. . The community's ecotourism has been developed to promote the practice of Tsou customs. . The community's ecotourism has been utilized to manage Tsou cultural property (e.g., art of Tsou dances, the valley of the Danayigu River). . The operation of the ecotourism in this community has been controlled by local Tsou people. . The community's ecotourism has been utilized to regain rights to use the traditional land of the Tsou people. . The Tsou tribe and ecotourism in this community have integrated together well.	<u>Indigenous Ecotourism Principles (Smith, 1999)</u> "The sustainability of indigenous peoples' languages, arts, and cultures."^a "Enhancing the regaining of indigenous territories."^a "Facilitating the development of indigenous lands and peoples (e.g., reach the goal of self-determination)."^a <u>Indigenous Ecotourism Principles (Turner et al., 2012)</u> – "Improve indigenous peoples' benefits and quality of life."^a – "Respect indigenous culture."^a <u>Indigenous Ecotourism Principles (Zeppel, 2006)</u> "Ecotourism is developed in accordance with indigenous knowledge systems and values."^a "Ecotourism is developed for promoting the practice of indigenous custom and indigenes' quality of life."^a "Ecotourism facilitates the management, usage and right recovery of indigenous people's traditional land and resources."^a "Ecotourism is utilized to manage indigenous cultural property such as cultural heritage and historical sites."^a "Local indigenous people actively participate in and control ecotourism operation."^a "Ecotourism is utilized to regain rights to access, manage and use traditional land and resources."^a

^a The items were selected because they were appropriate to the circumstances of the research site.

Table 3-8 (cont'd)

Indigenous Ecotourism Principles		
Construct & Variable	Measurement Item Selected Inclusion	Source and Original Item
Principles of Indigenous Ecotourism & Ecotourism	. Tsou people have participated in determining the use of resources in this community's ecotourism operations, including people. . The community's ecotourism has helped to improve respect for Tsou culture. . The community's ecotourism has provided positive experiences for local residents. . The community's ecotourism has provided funding for conservation. . The community's ecotourism has been appropriate for local conditions (e.g., local political affairs, environment, and society).	"Indigenous communities are integrated into ecotourism planning, development and operation."^a "Indigenous people participate in determining use of ecotourism resources, including people."^a <u>Ecotourism Principles (TIES, 2012)</u> "Improve the awareness and respect of culture and environment."^a "Engage in the provision of positive experiences for tourists and local residents."^a "Provide funding for conservation."^a "Improve the incomes and empowerment of local residents."^a "Be perceptive to local political, environmental, and social conditions."^a

^a The items were selected because they were appropriate to the circumstances of the research site.

Table 3-8 (cont'd)

Cultural Impacts		
Construct & Variable	Measurement Item Selected Inclusion	Source and Original Item
Positive Cultural Impacts	. Tsou cultural heritage has been preserved. . Local traditional crafts have been preserved and inherited. . Local cultural activities have been preserved and inherited (e.g., Millet Ceremony, Taiwan Ku Fish Festival). . The team spirit of the community has been enhanced. . The self-esteem of the residents of the community has been enhanced. . Respect for Tsou culture has increased. . The amount of Tsou language being spoken among local residents has increased. . Local residents have learned more about Tsou culture. . The sharing of cultures and beliefs between residents and tourists has been encouraged. . The education and interpretation of Tsou culture for tourists have increased.	<u>Besculides, Lee, & McCormick (2002)</u> “Preservation of our cultural heritage.”^a <u>Chen (2003)& Gartner (1996)</u> “Facilitate the preservation of the cultural heritage”^a <u>Chen (2003)</u> “Enhance the team spirit of the community”^a “Enhance the self-esteem of the residents of the community”^a “Preserve and inherit local traditional crafts and cultural activities”^a <u>Besculides, Lee, & McCormick (2002)</u> “Increase the amount of Spanish being spoken among Hispanic residents.”^a “Help local residents learn more about the Hispanic culture.”^a “Maintain my desired image of myself and my community.” “Preserve the stories and folklore which have been passed down.” “Revive the arts and traditions of the area.” <u>Beeton (1998)</u> Encourages the sharing of cultures and beliefs between residents and tourists.^a <u>Clifton & Benson (2006), Fotiou, Buhalis, & Vereczi, (2002) and Beeton, 1998)</u> Increases cultural education and interpretation for visitors.^a

^a The items were selected because they were appropriate to the circumstances of the research site.

Table 3-8 (cont'd)

Cultural Impacts		
Construct & Variable	Measurement Item Selected Inclusion	Source and Original Item
Negative Cultural Impacts	. Tsou people's values have been replaced by tourists' cultural values. . The respect for Tsou culture has decreased. . Tsou's traditional ceremonies have changed. . Tsou culture has been modified to satisfy tourists' demands. . The local culture demonstrated to tourists has been different than the authentic Tsou culture. . There has been an increasingly tense atmosphere, since tourists do not respect the customs and habits of local residents. . The daily life of local residents has been intruded upon by tourists.	<u>Besculides, Lee, & McCormick (2002)</u> "Assimilate the Hispanic Culture into the mainstream American culture."^a <u>Clifton & Benson (2006)</u> "Assimilate the traditional culture into the tourist culture."^a <u>Weaver (1998)</u> "Dilute the traditional culture of the community of local residents."^a <u>Chen (2003)</u> "Residents' traditional values are replaced by tourists' values."^a "Decrease the respect of traditional culture."^a <u>Khan (1997)</u> "Changes traditional ceremonies"^a <u>Besculides, Lee, & McCormick (2002)</u> "Commercialize the Hispanic culture."^a <u>Cheng (2004)</u> "The local culture demonstrated to tourists is different with the authentic culture"^a <u>Besculides, Lee, & McCormick (2002)</u> "Decrease the amount of Spanish being spoken among Hispanic residents."^a <u>Chen (2003)</u> "The buildings of the community gradually lost their traditional features"^a

^a The items were selected because they were appropriate to the circumstances of the research site.

Table 3-8 (cont'd)

Cultural Impacts		
Construct & Variable	Measurement Item Selected Inclusion	Source and Original Item
Negative Cultural Impacts	. Conflicts between local residents and tourists have increased. . The amount of Tsou language being spoken among local residents has decreased. . The buildings of the community have gradually lost Tsou traditional features.	<u>Chen</u> (2003) “Increase a tense atmosphere, since tourists do not respect the customs and habits of local residents.”^a “The daily life of local residents is intruded by tourists.”^a “Increase the conflicts between residents and tourists.”^a

^a The items were selected because they were appropriate to the circumstances of the research site.

Data Analysis Method

The data analyses of the study comprised descriptive analysis; item analysis, a normality test, a reliability and validity examination; and a proposed hypothesis examination. These analyses employed the statistic analysis software Statistical Package for the Social Sciences (SPSS) version 21.0 for Windows, and Mplus version 7.0 for Windows.

Descriptive Analyses

Descriptive analyses were performed for general description of the sample, which consisted of residents' socio-demographic profiles, acculturation characteristic profiles, degrees and types of acculturation profiles, perceived conformity to ecotourism principle profiles, and perceived cultural impact profiles. Descriptive statistics used in the study included frequency count, percentage, and mean.

Item Analysis, Normality Test, Reliability and Validity Assessment

Item analysis was employed to improve the internal consistency of the constructs in the study. The study utilized three approaches for the item analysis consisting of correlation analysis, reliability analysis, and factor analysis. A normality test was utilized to assess the distribution of the items in the study. In regard to the reliability assessment, the indices of Cronbach's alpha and composite reliability were employed to estimate the internal consistency of the indicators (i.e., observed variables) for their underlying latent constructs. In addition, convergent validity was examined by the factor analysis (i.e., factor loading values are significant and higher than 0.5 (Kalema, Olugbara, & Kekwaletswe, 2011; Said, Badru, & M, 2011), and the average variance extracted (AVE) approach. In terms of validity assessment, a paired constructs test (Anderson and Gerbing,

1988; Farrell, 2009) was employed to examine the discriminant validity between different constructs in the study.

Regression Analysis

A multiple regression analysis was used to identify the relationships and establish models between the independent and dependent variables. In terms of identifying relationships, the multiple regression analysis examined hypothesis four for the relationships between the eight indicators of the degree of acculturation and the two indicators (i.e., an assimilation-related indicator, an integration-related indicator) of the definitions of the degree of acculturation.

Structural Equation Model Analysis

The study employed SEM to study the model with both the observed and latent variables. One of the primary advantages of the Structural Equation Model (SEM) in comparison to a traditional regression analysis is that SEM enables researchers to study “both direct and indirect effects of variables involved in a given model” (Raykov & Marcoulides, 2006). Direct effects are when one variable directly brings about results on another variable; indirect effects are the effects between two variables, mediated by mediator(s) (Raykov & Marcoulides, 2006). In the study, SEM was used to examine hypothesis one, two, and three simultaneously to clarify the holistic relationships (including both direct and indirect effects) among acculturation (i.e., residents’ degrees of acculturation), ecotourism (i.e., residents’ perceived degree of ecotourism development that conforms to indigenous ecotourism and ecotourism principles), and cultural impact (i.e., the degree of the residents’ perceived cultural impact of ecotourism development).

In order to have a good-fitting model, five good-fit indices were employed as the criteria to assess the model fit. The five good-fit indices were 1) the value of the relative chi-square (χ^2/df), 2) the comparative fit index (CFI), 3) Tucker-Lewis index (TLI), 4) the root mean square error of approximation (RMSEA), and 5) the weighted root mean square residual (WRMR). Next, chapter four introduced the summary results of the data analyses that used these analysis methods.

CHAPTER 4

RESULTS

Summary results of the data analysis are presented in this chapter. A profile of detailed descriptions of the respondents is first introduced. The item analysis and normality test are presented next. This chapter also presents the test of the measurement model using a confirmatory factor analysis with the assessments of the model fit, reliability, and validity. The final section of the chapter presents the findings of testing hypotheses, which consist of direct and indirect effect results using a SEM analysis and multiple regression analysis.

General Description of the Sample

Various types of profiles are presented in this section, including residents' socio-demographics, acculturation characteristics, degrees and types of acculturation, perceived conformity to ecotourism principles, and perceived cultural impact.

Socio-Demographic Profile

The socio-demographic profile of the respondents presents a representation of the sample of the Saviki community and includes respondents' gender, marital status, educational level, age, members of households, work experiences, and income (Tables 4-1, 4-2, and 4-3). Among the respondents ($n = 321$) there were more males (53.0%) than females (47.0%). The majority of the respondents were married with children (70.1%). As for the respondent's educational level, nearly fifty percent (49.8%) of the respondents were junior high school or less, thirty-four percent were senior high school, fifteen percent completed college, and less than one percent (0.6%) had attended graduate school or held advanced degrees (Table 4-1). The respondent's age was between 20 and 87

(mean = 44.1 years of age). The respondents' households had at least one adult (mean = 3.6) and approximately eighty-three percent of households (83.3%) had children (mean = 2.5) (Table 4-2). More than eighty percent (80.4%) of the respondents participated in environmental conservation activities. In regard to work experiences, more than forty-three percent (43.3%) of the respondents worked in the field of agriculture. Nearly three-fourths of the respondents participated in ecotourism operations (76.3%) and worked in the Plain People's place (73.2%). The respondents' monthly income (85.3 %) was mostly less than NT \$30,000 and the average monthly income was in the range of NT \$20,000–\$29,999 (Table 4-3).

Table 4-1. Socio-Demographic Characteristics (n = 321)

Variables	Frequency	Percent (%)
Gender		
Male	170	53.0
Female	151	47.0
Marital Status		
Married, with children	225	70.1
Married, no children	25	7.8
Single, never married	59	18.4
Single, formerly married	10	3.1
Missing	2	0.6
Educational Level		
Junior high school, elementary school, or less	160	49.8
Senior high school	109	34.0
College	48	15.0
Graduate school or more	2	0.6
Missing	2	0.6

Table 4-2. Age and Members in the Households (n = 321)

Variables	Mean	Std. Deviation
Age (Missing = 1)	44.1	14.2
Number of adults in the household (Missing = 21)	3.6	2.3
Number of children in the household (Missing = 64)	2.5	2.5

Table 4-3. Work Experiences and Income (n = 321)

Variables	Frequency	Percent (%)
Participation in Environmental Conservation		
Activities		
Yes	258	80.4
No	56	17.4
Missing	7	2.2
Work in the Plain People's Place		
Yes	235	73.2
No	73	22.7
Missing	13	4.0
Monthly Income		
No income	56	17.4
Less than NT \$10,000	76	23.7
NT \$10,000–19,999	72	22.4
NT \$20,000–29,999	68	21.2
NT \$30,000–39,999	28	8.7
NT \$40,000–49,999	8	2.5
NT \$50,000–59,999	4	1.2
NT \$60,000–69,999	3	0.9
NT \$70,000–79,999	3	0.9
NT \$80,000 or more	1	0.3
Missing	2	0.6
Participation in Ecotourism Operations^a		
Dancing	97	30.2
Environment Maintenance and Cleanliness	88	27.4
Restaurant Industry	71	22.1
Interpretation	56	17.4
Tourist Services	52	16.2
Making Traditional Crafts	51	15.9
Singing	42	13.1
Retail	27	8.4
Hotel Industry	27	8.4
Management	22	6.9
Travel Agency	1	0.3
Other	8	2.5
None	76	23.7
Missing	2	0.6

^a Multiple responses allowed

Table 4-3 (cont'd)

Variables	Frequency	Percent (%)
Occupation^a		
Agriculture	139	43.3
Housekeeper	51	15.9
Temporary Work	34	10.6
Restaurant Industry	28	8.7
Ecotourism	26	8.1
Government	18	5.6
Construction	15	4.7
Hunting	13	4.1
Education	10	3.1
Unemployed	10	3.1
Making Traditional Crafts	9	2.8
Retail	9	2.8
Retired	7	2.2
Student	6	1.9
Hotel Industry	5	1.6
Travel Agency	3	0.9
Animal Breeding	2	0.6
Other	31	9.7
Missing	1	0.3

^a Multiple responses allowed

Residents' Acculturation Characteristics Profile

In terms of the acculturation scales, ten scales with five ordered categories were employed to measure the respondents' characteristics of acculturation in the study. These scales consisted of ethnic identity, belief in Tsou values, ethnic pride, language usage, music preference, food preference, participation in Tsou ceremonies, friends' ethnic groups, the importance of becoming a member of the Plain People, and the importance of not becoming a member of the Plain People (Tables 4-4, 4-8, 4-9).

With regard to the indicator variables of cultural self-identification, as for ethnic identity, more than eighty-five percent of respondents (85.7%) identified themselves to be very much Tsou. This percent is relatively lower than the percent (90.6%) of the respondents with parents who were Tsou descent (Tables 4-5, 4-6, 4-7). The majority of

the respondents (80.7%) reported that they strongly believed in the values of the Tsou people. More than three-fourths (76.9%) of the respondents reported that they were extremely proud of being members of the Tsou people (Table 4-4).

Table 4-4. Cultural Identity, Values, and Pride (n = 321)

Variables	Frequency	Percent (%)
Ethnic Identity		
Very Tsou people	275	85.7
Mostly Tsou people	12	3.7
Bicultural	24	7.5
Mostly non-Tsou people	3	0.9
Very non-Tsou people	3	0.9
Missing	4	1.2
Belief in Tsou Values		
Strongly believe	259	80.7
Moderately believe	49	15.3
Believe a little	5	1.6
Do not believe but do not feel negative toward Tsou people's values	4	1.2
Do not believe and feel negative toward Tsou people's values	4	1.2
Ethnic Pride		
Extremely proud	247	76.9
Moderately proud	43	13.4
Neither proud nor negative	23	7.2
Somewhat negative	1	0.3
Strongly negative	5	1.6
Missing	2	0.6

Table 4-5. Parents' Ethnic Identity (n = 321)

Variables	Frequency	Percent (%)
Mother's Ethnic Identity		
Tsou People	298	92.8
Non-Tsou People	22	6.9
Missing	1	0.3
Father's Ethnic Identity		
Tsou People	296	92.2
Non-Tsou People	24	7.5
Missing	1	0.3

Table 4-6. Analysis of Parent's Ethnic Identity (n = 320)

Parents' Ethnic Identity			Mother's Ethnic Identity	
			Tsou People	Non-Tsou People
Father's Ethnic Identity	Tsou People	Frequency	290	8
		% of Total	90.6%	2.5%
	Non-Tsou People	Frequency	6	16
		% of Total	1.9%	5.0%

Table 4-7. Means of Ethnic Identity

Ethnic Identity ^a	Mean	Std. Deviation
Ethnic identity	1.3	0.7
Ethnic identity of the ones with two Tsou parents	1.2	0.5
Ethnic identity of the ones with one Tsou parent	1.7	1.1
Ethnic identity of the ones with two non-Tsou parents	2.6	1.5

^a Scale ranged from "1= Very Tsou people" to "5 = Very non-Tsou people."

For the indicator variables of personal cultural exposure and interaction, nearly twenty-nine percent of the respondents (28.9%) spoke the Tsou language better than Chinese; about forty-two percent (44.2%) spoke both the Tsou language and Chinese equally well; and approximately twenty-five percent (25.5%) spoke Chinese better than the Tsou language (Table 4-8). About a quarter of the respondents preferred the Tsou people's music over Plain People's music; almost seventy percent (69.8%) equally preferred Tsou and Plain People's music; only approximately four percent (3.7%) preferred Plain People's music over Tsou music. Nearly seventy percent (68.2%) of the respondents equally preferred the Tsou people's and Plain People's food; approximately twenty-eight percent (28.4%) preferred the Tsou people's food; only about three percent (2.8%) preferred Plain People's food more than Tsou People's food. Furthermore, nearly seventy percent (68.9%) of the respondents had participated in Tsou ceremonies. More

than fifty-four percent (54.8%) of the respondents had more friends who were members of the Tsou People than Plain People; about thirty-eight percent (38.3%) had an equal number of friends between Tsou People and Plain People; only about six percent (5.9%) had more friends of Plain People than Tsou People (Table 4-8).

Table 4-8. Cultural Exposures and Interactions (n = 321)

Variables	Frequency	Percent (%)
Language Usage		
Speak only Tsou language	13	4.0
Speak Tsou language better than Chinese	80	24.9
Speak both Tsou language and Chinese equally well	142	44.2
Speak Chinese better than Tsou language	71	22.1
Speak only Chinese	11	3.4
Missing	4	1.2
Music Preference		
Only Tsou People's music	28	8.7
Mostly Tsou People's music	54	16.8
Equally Tsou and Plain People's music	224	69.8
Mostly Plain People's music	10	3.1
Only Plain People's music	2	0.6
Missing	3	0.9
Food Preference		
Exclusively Tsou People's food	32	10.0
Mostly Tsou People's food	59	18.4
About equally Tsou People's and Plain People's food	219	68.2
Mostly Plain People's food	9	2.8
Exclusively Plain People's food	0	0.0
Missing	2	0.6
Participation in Tsou Ceremonies		
Nearly all	92	28.7
Most of them	93	29.0
Some of them	80	24.9
A few of them	48	15.0
None at all	7	2.2
Missing	1	0.3

Table 4-8 (cont'd)

Variables	Frequency	Percent (%)
Friends' Ethnic Groups		
Almost exclusively Tsou People	78	24.3
Mostly Tsou People	98	30.5
About equally Tsou People and Plain People	123	38.3
Mostly Plain People	19	5.9
Almost exclusively Plain People	1	0.3
Missing	2	0.6

A pair of reverse coded scales was employed to measure respondents' acculturation motivation (Table 4-9). Nearly seventy percent (68.3%) of the respondents reported that the avoidance of becoming a member of the Plain People was most important to them; more than sixteen percent (16.7%) reported this as very important; approximately twelve percent (11.8%) reported it as being important; and only about three percent (3.2%) reported it as being less than important. In regard to the other reverse coded scale, nearly sixty-seven percent (66.7%) of the respondents reported that it was least important to become a member of the Plain People; close to seventeen percent (16.7%) reported it as being somewhat important; ten percent reported it as being important; and less than five percent (4.6%) reported it as being very important or most important. Aside from this, there were 98 respondents who provided inconsistent answers for these reverse coded scales (e.g., in regard to becoming a member of the Plain People, 48 respondents expressed that it was both most important to them to "avoid becoming" and "become" a member of the Plain People). These inconsistent answers were treated as incorrect answers and were coded as missing data. In the pretest and main surveys, some respondents expressed disliking this type of question (i.e., becoming a member of the Plain People) or expressed that they were confused by the reverse coded questions. The two reasons may cause the high percentage (30.5%) of inconsistent answers (Table 4-9).

Table 4-9. Acculturation Motivation (n = 321)

Variables	Frequenc y	Percent (%)	Valid Percent (%)
Importance of Not Becoming a Plain People			
Most Important	151	47.0	68.3
Very Important	37	11.5	16.7
Important	26	8.1	11.8
Somewhat important	5	1.6	2.3
Least important	2	.6	0.9
Missing	100	31.2	
Importance of Becoming a Plain People			
Most Important	3	.9	1.4
Very important	7	2.2	3.2
Important	22	6.9	10.0
Somewhat important	41	12.8	16.7
Least important	146	45.5	66.7
Missing	102	31.8	

Residents' Degrees and Types of Acculturation Profile

There were two indicators tested to measure the level of acculturation. Two indicator variables were also used to identify respondents' types of acculturation (Tables 4-10, 4-11 and 4-12).

According to the definition of acculturation, two indicator variables were developed to measure respondents' degree of acculturation. The two indicator variables that reflected the definitions of acculturation were 1) "extent of becoming like the Plain People" for the definition of assimilation, and 2) "extent of adapting to the Plain People's culture" for the definition of integration (Table 4-10). In the first indicator variable, nearly sixty percent (58.6%) of the respondents reported that they were not at all like the Plain People; forty percent were somewhat like; more than fourteen percent were like (14.3%); about three percent (3.4%) were very like; and close to ten percent (9.7%) were completely like the Plain People. In the second indicator variable, about eighteen percent

(18.1%) of the respondents reported that they were not at all adapted to the Plain People's culture; more than twenty-four percent (24.3%) were somewhat adapted; approximately thirty percent (24.3%) were moderately adapted; fourteen percent were very adapted; and more than thirteen percent (13.4%) were completely adapted to the Plain People's culture (Table 4-10).

Table 4-10. Degree of Acculturation (n = 321)

Variables	Frequency	Percent (%)
Extent of Becoming Like the Plain People		
Completely like	31	9.7
Very like	11	3.4
Like	46	14.3
Somewhat like	45	14.0
Not at all like	188	58.6
Extent of Adapting to the Plain People's Culture		
Completely adapted	43	13.4
Very adapted	45	14.0
Moderately adapted	97	30.2
Somewhat adapted	78	24.3
Not at all adapted	58	18.1

With regard to types of acculturation, in accordance with Berry's theory (1980, 2003), two indicator variables were employed to classify the types of acculturation (i.e., willingness to keep the Tsou People's identity, willingness to learn Plain People's culture) (Tables 4-11 and 4-12). The results of the indicator variables show that ninety-five percent of the respondents were willing to keep the Tsou People's identity. Fifty-two percent of the respondents were willing to learn Plain People's culture (Table 4-11). Based on Berry's four types of acculturation (1980, 2003), the categorizing results of acculturation showed that more than fifty percent (50.8%) of the respondents were integrating into the Plain People's culture; forty-five percent were separating from the Plain People's culture; less than four percent (3.6%) were assimilating into the Plain

People's culture; and close to five percent (4.7%) of the respondents became culturally marginal individuals of the Tsou and Plain People's cultures (Table 4-12).

Table 4-11. Attitude Toward the Tsou and Plain People's Cultures (n = 321)

Variables	Frequency	Percent (%)
Willingness to Keep Tsou People's Identity		
Yes	305	95.0
No	14	4.4
Missing	2	0.6
Willingness to Learn Plain People's Culture		
Yes	167	52.0
No	148	46.1
Missing	6	1.9

Table 4-12. Types of Acculturation in the Tsou Tribe of Saviki Community (n = 313)

Varieties of Acculturation	Willingness		Frequency	Percent (%)
	to Keep Tsou People's Identity	to Learn Plain People's Culture		
Integration	Yes	Yes	159	50.8
Assimilation	No	Yes	6	3.6
Separation	Yes	No	141	45.0
Marginalization	No	No	7	4.7

Residents' Perceived Conformity to Ecotourism Principle Profile

Eleven indicator variables with seven-point likert scales were employed to estimate respondents' perception that ecotourism development in the Saviki community conformed to indigenous ecotourism and ecotourism principles. As shown in Table 4-13, the mean scores of indigenous ecotourism and ecotourism principles ranged from a high of 5.64 to a low of 4.72.

In the indigenous ecotourism principles (i.e., the first seven principles in Table 4-13), except the principle of "the ecotourism regaining rights to use the traditional land of the Tsou people," which had a mean score less than five (i.e., 4.72), all the other principles

had a mean score more than five. The principle of “the ecotourism being controlled by local Tsou people” reached the highest level of agreement (mean = 5.64), whereas “the ecotourism regaining rights to use the traditional land of the Tsou people” had the lowest level of agreement (mean = 4.72).

In regard to ecotourism principles (i.e., the last four principles in Table 4-13), all principles had a mean score of more than five. The principle of “ecotourism appropriate for local conditions” reached the highest level of agreement (mean = 5.50), while “ecotourism provided funding for conservation” had the lowest level of agreement (mean = 5.35).

Table 4-13. Principles of Indigenous Ecotourism and Ecotourism

Variables^a	Mean	Std. Deviation
<u>Indigenous Ecotourism Principles</u>		
The operation of the ecotourism in this community has been controlled by local Tsou people	5.64	1.51
Tsou people have participated in determining the use of resources in this community’s ecotourism operations, including people	5.39	1.55
The community’s ecotourism has been developed in accordance with Tsou culture and values	5.29	1.51
The community’s ecotourism has been developed to promote the practice of Tsou customs	5.23	1.53
The Tsou tribe and ecotourism in this community have integrated together well	5.18	1.60
The community’s ecotourism has been utilized to regain rights to use the traditional land of the Tsou people	4.72	1.81

^a Scale ranged from “1= Strongly disagree” to “7 = Strongly agree.”

Table 4-13 (cont'd)

Variables^a	Mean	Std. Deviation
<u>Ecotourism Principles</u>		
The community's ecotourism has been appropriate for local conditions	5.50	1.46
The community's ecotourism has provided positive experiences for local residents	5.44	1.48
The community's ecotourism has helped to improve the respect for Tsou culture	5.43	1.39
The community's ecotourism has provided funding for conservation	5.35	1.39

^a Scale ranged from "1= Strongly disagree" to "7 = Strongly agree."

Residents' Perceived Cultural Impact Profile

Perceived cultural impacts of ecotourism were measured by two constructs: perceived positive cultural impact using five indicator variables, and perceived negative cultural impact, also using five indicator variables (Tables 4-14 and 4-15). The ten indicator variables had seven-point likert scales.

All of the perceived positive cultural impacts had a mean score of more than five (Table 4-14). The mean scores of the perceived positive cultural impacts ranged from 5.61 to 5.33. In the indicator variables of the positive cultural impacts, "preserving Tsou cultural heritage" reached the highest level of agreement (mean = 5.61), whereas "enhancing the team spirit of the community" had the lowest level of agreement (mean = 5.33) (Table 4-14).

Table 4-14. Perceived Positive Cultural Impacts of Ecotourism

Variables^a	Mean	Std. Deviation
The community's ecotourism has preserved and inherited local cultural activities	5.71	1.29
The community's ecotourism has preserved Tsou cultural heritage	5.61	1.37
The community's ecotourism has preserved and inherited local traditional crafts	5.60	1.28
The community's ecotourism has made local residents learn more about Tsou culture	5.54	1.35
The community's ecotourism has enhanced the team spirit of the community	5.33	1.51

^a Scale ranged from "1= Strongly disagree" to "7 = Strongly agree."

In regard to perceived negative cultural impacts, all of the indicator variables of the perceived negative cultural impacts had a mean score of more than four (Table 4-15). The mean scores of the perceived negative cultural impacts ranged from 4.27 to 4.68. In the indicator variables of the negative cultural impacts, "making Tsou culture modified to satisfy tourists' demands" reached the highest level of agreement (mean = 4.68), while "making Tsou people's values replaced by tourists' cultural values" had the lowest level of agreement (mean = 4.27). In the surveys, some respondents hesitated to express their attitude about any the negative cultural impacts because they worried about the other residents of the Saviki community knowing their negative comments on the ecotourism development (Table 4-15).

Table 4-15. Perceived Negative Cultural Impacts of Ecotourism

Variables^a	Mean	Std. Deviation
The community's ecotourism has modified Tsou culture to satisfy tourists' demands	4.68	1.55
Through the development of ecotourism in this community, the local culture demonstrated to tourists has been different than the authentic Tsou culture	4.60	1.64
Due to the development of ecotourism in this community, the amount of Tsou language being spoken among local residents has decreased	4.53	1.65
In the community's ecotourism, some tourists do not respect the customs and habits of local residents, which causes an increasingly tense atmosphere between the residents and tourists	4.37	1.64
The community's ecotourism has replaced Tsou people's values with tourists' cultural values	4.27	1.73

^a Scale ranged from "1= Strongly disagree" to "7 = Strongly agree."

Item Analysis and Normality Test

In this section, item analysis consisting of correlation analysis reliability analysis and factor analysis were employed to assess the internal consistency of the constructs in the study. A normality test was utilized to assess the distribution of the items in the study.

Before conducting item analysis, a pair of reverse coded variables (i.e., important level of not becoming a Plain People, important level of becoming a Plain People) was discarded because, in the two variables, more than thirty percent (30.5%) of the respondents provided inconsistent answers.

Corrected Item-Total Correlation

With regard to item analysis, three criteria (i.e., corrected-item-total correlation, internal consistency reliability test, and factor loading) were employed to analyze the constructs of the study to improve the internal consistency of the constructs (Tables 4-16, 4-17, 4-18, and 4-19). The corrected item-total correlation examined the correlation between an item's score and the total item's score for each item of the constructs. The results showed that the items were at moderate-to-high levels (i.e., from 0.626 to 0.928) of correlation with the total item's score. In the study, two constructs (i.e., cultural self-identification, personal cultural exposure and interaction) were employed to estimate residents' degree of acculturation. In the two constructs, the correlation coefficients of cultural self-identification ranged from 0.713 to 0.822 (Table 4-16), and the personal cultural exposure and interaction construct ranged from 0.626 to 0.742 (Table 4-16). The correlation coefficients of the construct of perceived conformity to indigenous ecotourism and ecotourism principles ranged from 0.720 to 0.867 (Table 4-17); the construct of the perceived positive cultural impacts of ecotourism ranged from 0.821 to 0.928 (Table 4-18); and the construct of the perceived negative cultural impacts of ecotourism ranged

from 0.722 to 0.761 (Table 4-18). The recommended standards of the corrected item-total correlation include a significant correlation and one that is greater than 0.4 of the correlation coefficient (Chiou, 2002; Hsieh, 2010; Deng & Chen, 2010). These standards are for correlations between the scores of each single item and the sum of total items of the constructs. The results revealed that all items had significant correlation and had correlation coefficients that exceeded the recommended value of the corrected item-total correlation.

Internal Consistency Reliability

Internal consistency reliability was conducted to estimate the reliability score for each of the constructs. The reliability coefficient, Cronbach's alpha, is suggested to be higher than 0.7; however, a range between 0.6 and 0.69 is also considered to be the minimum acceptable standard (Gliner, Morgan, & Leech, 2009; Modi & Quittner, 2003). In the reliability analysis, Cronbach's alpha-if-item-deleted was also employed to determine whether an item should be discarded or not. An item was considered to be discarded when the analyses of Cronbach's alpha-if-item-deleted indicated that discarding this item would improve the internal consistency reliability of a construct.

In the two constructs of degree of acculturation, the first construct, cultural self-identification, exceeded the minimum Cronbach's alpha coefficient of 0.60 (i.e., 0.628), and no item should be dropped to improve its internal consistency reliability. Their second construct, cultural self-identification, personal cultural exposure and interaction, had the Cronbach's alpha coefficient of 0.691, which was improved from 0.678 by omitting the item of participation in Tsou ceremonies (Table 4-16). The construct of perceived conformity to indigenous ecotourism and ecotourism principles

had an excellent Cronbach's alpha coefficient of 0.944, which was slightly improved from 0.943 by discarding the item of regaining rights to use the traditional land of the Tsou people (Table 4-17). The construct of the perceived positive cultural impact of ecotourism had an excellent Cronbach's alpha coefficient of 0.927, which retained the item of enhancing the team spirit of the community in order to maintain a good model fit for the structural regression model of the study (Table 4-18). The construct of the perceived negative cultural impact of ecotourism had a good Cronbach's alpha coefficient of 0.802, and no item should be discarded to improve its internal consistency reliability (Table 4-19).

Factor Analysis

In terms of factor loading criterion, an item will be suggested to be discarded when its factor loading is lower than 0.50 (Kalema, Olugbara, & Kekwaletswe, 2011; Kim, 2010; Kline, 2011; Said, Badru, & M, 2011). The results of confirmatory factor analysis with standardized factor loadings showed that all of the items of the constructs had values greater than 0.50, except one item (i.e., modifying Tsou culture to satisfy tourists' demands) in the construct of the perceived negative cultural impact of ecotourism. So, there was one item to be discarded for not conforming to the criterion of factor loading (Tables 4-16, 4-17, 4-18, and 4-19).

Table 4-16. Summary of Item Analysis of the Two Acculturation Constructs

Measurements for Degree of Acculturation	Indicator Variables (items)	Pearson Correlation	Cronbach's Alpha If Item Deleted	Factor Loading	Item Accepted or Deleted
Cultural Self-Identification	Ethnic identity	.713**	.627	.707	Accepted
	Belief in Tsou values	.822**	.330	.822	Accepted
	Ethnic pride	.744**	.612	.735	Accepted
Accepted Criteria of Indicator Variables:		≥ 0.4	$\geq .628^a$	$\geq .500$	
Personal Cultural Exposure and Interaction	Language usage	.707**	.600	.743	Accepted
	Music preference	.742**	.574	.804	Accepted
	Food preference	.626**	.630	.669	Accepted
	Participation in Tsou ceremonies	.655**	.691	.572	Deleted
	Friends' ethnic groups	.640**	.649	.521	Accepted
Accepted Criteria of Indicator Variables:		≥ 0.4	$\geq .678^b$	$\geq .500$	

^a Cronbach's alpha of the construct of cultural identity, values and pride

^b Cronbach's alpha of the construct of cultural exposure and interaction

** Correlation is significant at the 0.01 level (2-tailed).

Table 4-17. Summary of Item Analysis of the Construct of Perceived Conformity to Indigenous Ecotourism and Ecotourism Principles

Measurements	Indicator Variables (items)	Pearson Correlation	Cronbach's Alpha If Item Deleted	Factor Loading	Item Accepted or Deleted
Perceived Conformity to Principles of Indigenous Ecotourism and Ecotourism	Be in accordance with Tsou culture and values	.794**	.938	.790	Accepted
	Promote the practice of Tsou customs	.823**	.937	.793	Accepted
	Manage Tsou cultural property	.844**	.936	.824	Accepted
	Be controlled by local Tsou people	.762**	.940	.703	Accepted
	Regain rights to use the traditional land of the Tsou people	.720**	.944	.673	Deleted
	Integrated well with the Tsou tribe	.867**	.935	.861	Accepted
	Determine the use of resources	.777**	.939	.720	Accepted
	Improve the respect for Tsou culture	.811**	.937	.813	Accepted
	Provide positive experiences for local residents	.823**	.937	.829	Accepted
	Provided funding for conservation	.786**	.938	.774	Accepted
	Be appropriate for local conditions	.819**	.937	.823	Accepted
Accepted Criteria of Indicator Variables:		≥ 0.400	$\geq .943^a$	$\geq .500$	

^a Cronbach's alpha of the construct of the Principles of Indigenous Ecotourism and Ecotourism

** Correlation is significant at the 0.01 level (2-tailed).

Table 4-18. Summary of Item Analysis of the Construct of the Perceived Positive Cultural Impact of Ecotourism

Measurements	Indicator Variables (items)	Pearson Correlation	Cronbach's Alpha If Item Deleted	Factor Loading	Item Accepted or Deleted
Perceived Positive Cultural Impact of Ecotourism	Preserve Tsou cultural heritage	.892**	.907	.887	Accepted
	Preserve and inherit local cultural activities	.928**	.896	.897	Accepted
	Preserve and inherit local traditional crafts	.902**	.904	.881	Accepted
	Enhance the team spirit of the community	.821**	.934	.763	Accepted
	Make local residents learn more about Tsou culture	.876**	.911	.835	Accepted
Accepted Criteria of Indicator Variables:		≥ 0.400	$\geq .927^a$	$\geq .500$	

^a Cronbach's alpha of the construct of the Perceived Positive Cultural Impact of Ecotourism

** Correlation is significant at the 0.01 level (2-tailed).

Table 4-19. Summary of Item Analysis of the Construct of the Perceived Negative Cultural Impact of Ecotourism

Measurements	Indicator Variables (items)	Pearson Correlation	Cronbach's Alpha If Item Deleted	Factor Loading	Item Accepted or Deleted
Perceived Negative Cultural Impact of Ecotourism	Replace Tsou people's values with tourists' cultural values	.773**	.757	.803	Accepted
	Modify Tsou culture to satisfy tourists' demands	.722**	.771	.487	Deleted
	Tourists do not respect the customs and habits of local residents	.738**	.769	.720	Accepted
	The amount of Tsou language being spoken among local residents has decreased	.743**	.767	.658	Accepted
	The local culture demonstrated to tourists has been different than the authentic Tsou culture	.761**	.758	.623	Accepted
Accepted Criteria of Indicator Variables:		≥ 0.400	≥ .802 ^a	0.500	

^a Cronbach's alpha of the construct of the Perceived Negative Cultural Impact of Ecotourism

** Correlation is significant at the 0.01 level (2-tailed).

Normality Test

In regard to the normality test, skewness and kurtosis were employed to assess whether the distribution of the items in the study meets normality. Some estimations (e.g., the maximum likelihood estimation) in the analysis of Structural Equation Modeling (SEM) have the normality assumption for the items that are in the SEM model. The results of a normality test for the items facilitate the selection of suitable estimations when conducting the analysis of SEM. The recommended values for the normal distribution are that an item has the value of skewness in the range from negative three to positive three ($-3 < \text{skewness} < 3$), and the value of kurtosis in the range from negative eight to positive eight ($-8 < \text{kurtosis} < 8$) (Hsieh, 2010).

In the results of the normality test, the cultural self-identification construct showed that the values of skewness ($-1.159 \leq \text{skewness} \leq 3.371$) and kurtosis ($-0.851 \leq \text{kurtosis} \leq 13.241$) exceeded the recommended values for the normality distribution; thereby, the estimations that allow severe non-normality data should be employed in the analysis of SEM. The other four constructs (i.e., personal cultural exposure and interaction, perceived conformity to indigenous ecotourism and ecotourism principles, perceived positive cultural impact of ecotourism, perceived negative cultural impact of ecotourism) have the values of skewness and kurtosis in the range of the recommended values and showed no extreme departures from normality (Table 4-20).

In summary, five items were discarded from the initial model in order to improve the reliability and validity of the study. Two items (i.e., importance of not becoming a Plain People, importance of becoming a Plain People) were dropped because of their high percentages of incorrect answers; two items (i.e., participation in Tsou ceremonies, regaining rights to use the traditional land of the Tsou people) were omitted to improve

the internal consistency reliability of their constructs; one item (i.e., modifying Tsou culture to satisfy tourists' demands) was eliminated because of low factor loading for improving internal consistency for its construct. Aside from this, the items in the two constructs of degree of acculturation (i.e., cultural self-identification, personal cultural exposure and interaction) are ordered categorical variables with five categories. In these two constructs, some items in this construct showed that their distributions severely violated the normality. Therefore, the estimation that was employed in the SEM analysis in the study should be capable of dealing with items with both normal and non-normal distributions.

Table 4-20. Normality Test for the Indicator Variables of the Measurements

Measurements	Indicator Variables (items)	Skewness	Kurtosis
Cultural Self-Identification	Ethnic identity	3.005	9.040
	Belief in Tsou values	3.371	13.241
	Ethnic pride	2.615	7.585
Personal	Language usage	.025	-.201
Cultural	Music preference	-.955	1.440
Exposure and	Food preference	-1.159	.697
Interaction	Participation in Tsou ceremonies	.377	-.844
	Friends' ethnic groups	.022	-.851
Perceived	Be in accordance with Tsou culture and	-1.082	.723
Conformity to	values		
Principles of	Promote the practice of Tsou customs	-1.108	.762
Indigenous	Manage Tsou cultural property	-1.351	1.514
Ecotourism	Be controlled by local Tsou people	-1.373	1.295
and	Regain rights to use the traditional land of	-.577	-.711
Ecotourism	the Tsou people		
	Integrated well with the Tsou tribe	-.923	.064
	Determine the use of resources	-1.147	.661
	Improve the respect for Tsou culture	-1.162	1.307
	Provide positive experiences for local residents	-1.208	1.143
	Provided funding for conservation	-1.160	1.193
	Be appropriate for local conditions	-1.287	1.286

Table 4-20 (cont'd)

Measurements	Indicator Variables (items)	Skewness	Kurtosis
Perceived	Preserve Tsou cultural heritage	-1.382	1.670
Positive	Preserve and inherit local cultural	-1.676	3.159
Cultural	activities		
Impact of	Preserve and inherit local traditional	-1.512	2.620
Ecotourism	crafts		
	Enhance the team spirit of the community	-1.112	.711
	Make local residents learn more about	-1.277	1.537
	Tsou culture		
Perceived	Replace Tsou people's values with	-.411	-1.001
Negative	tourists' cultural values		
Cultural	Modify Tsou culture to satisfy tourists'	-.780	-.190
Impact of	demands		
Ecotourism	Tourists do not respect the customs and	-.429	-.718
	habits of local residents		
	The amount of Tsou language being	-.526	-.747
	spoken among local residents has		
	decreased		
	The local culture demonstrated to tourists	-.678	-.430
	has been different than the authentic Tsou		
	culture		

Testing the Measurement Model

The measurement model was estimated before specifying the structural equation model according to the recommended two-step modeling approach of Anderson and Gerbing's (1988). A confirmatory factor analysis (CFA) was conducted for the measurement model that provided the measurement assessing the relationships between the observed variables and their underlying latent constructs. The estimated CFA model employed the Mean- and Variance-adjusted Weighted Least Square estimation (WLSMV). Muthén and Muthén (2012) indicated that the WLSMV estimation utilizes "a diagonal weight matrix with standard errors and mean- and variance-adjusted chi-square test statistic using a full weight matrix."

In a model with ordered categorical variables, if these variables are not severe non-normality and have at least five categories, these variables can be treated as continuous variables in the analysis using the maximum likelihood (ML) estimation with a slightly misleading effect on the model fit indices and a causes small degree of underestimation on the parameter estimates (Lei & Wu, 2012; Muthén & Kaplan, 1985). Nevertheless, when ordered categorical variables are severe non-normality, the SEM analysis using the ML estimation can have seriously misleading effects on the model fit indices and gravely underestimate parameter values (Lei & Wu, 2012). The WLSMV estimation, using a Satorra-Benter scaled statistic on polychoric and polyserial correlations, is capable of accurately treating a model that includes the ordered categorical variables with severe non-normality and has a sample size of 200 or greater (Finney & DiStefano, 2006; Flora & Curran, 2004; Lei & Wu, 2012; Newsom, 2012). Accordingly, the WLSMV estimation is adequate to be the estimator of the study's proposed model, which has ordered categorical variables with severe non-normality, and has a sample size of more than 200 (i.e., 321).

As shown in Figure 4-1, the proposed measurement model consisted of five latent constructs and 26 observed variables. The construct of cultural self-identification was specified by three variables. Personal cultural exposure and interaction was specified by four variables. Perceived positive cultural impact of ecotourism was specified by five variables. Perceived negative cultural impact of ecotourism was specified by four variables. Perceived conformity to principles of indigenous ecotourism and ecotourism was specified by ten variables.

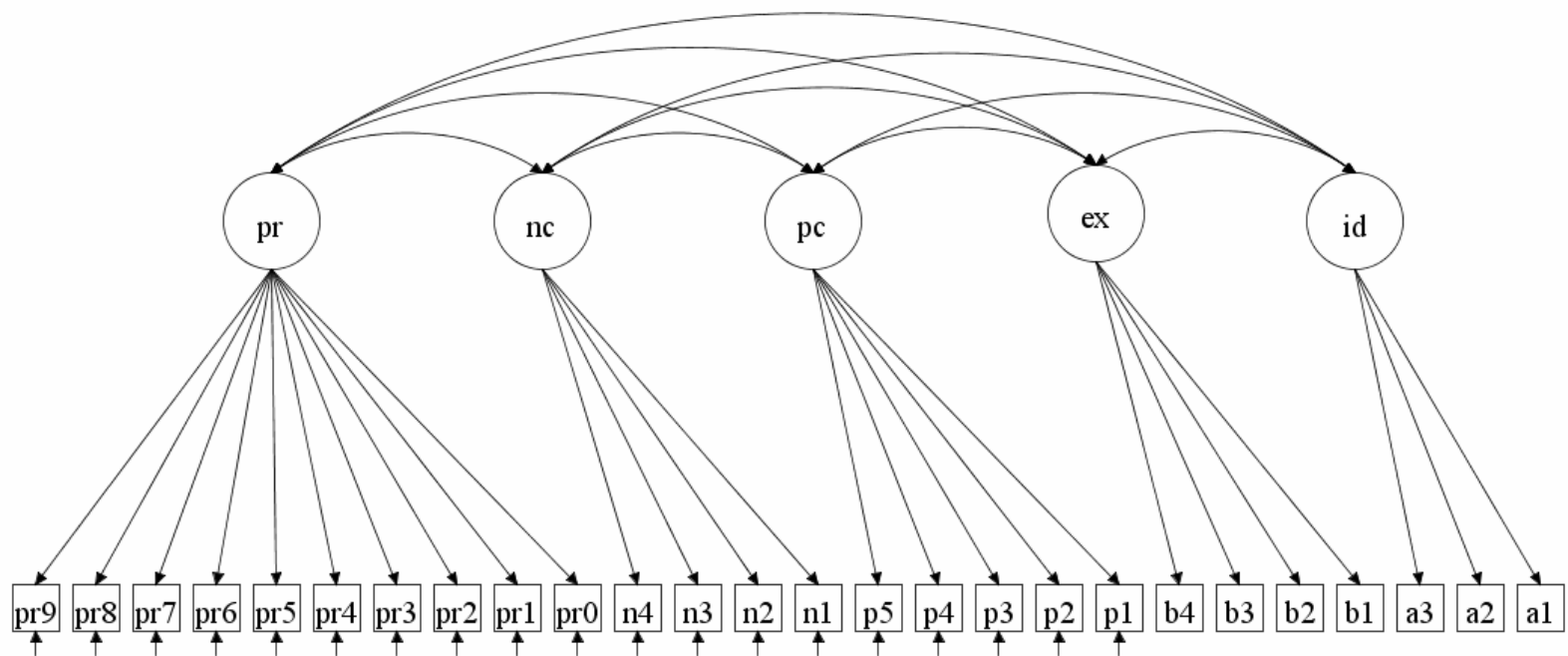


Figure 4-1. The Proposed Measurement Model

Figure 4-1 (cont'd)

Note: id: Cultural Self-Identification, a1: Ethnic identity, a2: Belief in Tsou values, a3: Ethnic pride, ex: Personal Cultural Exposure and Interaction, b1: Language usage, b2: Music preference, b3: Food preference, b4: Friends' ethnic groups, pc: Perceived Positive Cultural Impact of Ecotourism, p1: Preserve Tsou cultural heritage, p2: Preserve and inherit local cultural activities, p3: Preserve and inherit local traditional crafts, p4: Enhance the team spirit of the community, p5: Make local residents learn more about Tsou culture, nc: Perceived Negative Cultural Impact of Ecotourism, n1: Replace Tsou people's values with tourists' cultural values, n2: Tourists do not respect the customs and habits of local residents, n3: The amount of Tsou language being spoken among local residents has decreased, n4: The local culture demonstrated to tourists has been different than the authentic Tsou culture, pr: Perceived Conformity to Principles of Indigenous Ecotourism and Ecotourism, pr0: Be in accordance with Tsou culture and values, pr1: Promote the practice of Tsou customs, pr2: Manage Tsou cultural property, pr3: Be controlled by local Tsou people, pr4: Integrated well with the Tsou tribe, pr5: Determine the use of resources, pr6: Improve the respect for Tsou culture, pr7: Provide positive experiences for local residents, pr8: Provided funding for conservation, and pr9: Be appropriate for local conditions.

The proposed measurement model was estimated by a CFA analysis that utilized the WLSMV estimation to examine whether the measurement model fit the data set. Five good-fit indices (i.e., chi-square, CFI, TLI, RMSEA, WRMR) were employed as the criteria for examining the model fit. The good-fitting model was based on the model that fit the criteria: 1) the value of the relative chi-square (χ^2/df) is less than three (Hsieh, 2010; Kline, 2005; Simon & Paper, 2007); 2) the comparative fit index (CFI) is greater than 0.9 (Bollen, 1989; Green et al., 2012; Hsieh, 2010; Kim, 2010); 3) Tucker-Lewis index (TLI) is greater than 0.9 (Green et al., 2012; Kim, 2010); 4) the root mean square error of approximation (RMSEA) is less than 0.06 (Schreiber et al., 2006); and 5) the weighted root mean square residual (WRMR) is less than 0.9 (Green et al., 2012; Schreiber et al., 2006). Aside from this, the chi-square test of model fit has a tendency to be significant because of a large sample size (Flora & Curran, 2004; Hsieh, 2010; Kim, 2010).

The results of the CFA measurement model showed a good fit to the data set on the

five good-fit indices ($\chi^2/\text{df} = 1.452$; CFI = 0.933; TLI = 0.924; RMSEA = 0.038; WRMR = 0.815) (Table 4-21). The chi-square test of model fit for the proposed model was significant because of the large sample size. Therefore, according to the results of the CFA model, the proposed model was acceptable.

Table 4-21. The Summary of the Proposed Model Assessment

	χ^2	χ^2/df	CFI	TLI	RMSEA	WRMR
The Proposed Model	419.704	1.452***	0.933	0.924	0.038	0.815
Recommended Value	N/A	<3.000	>0.900	>0.900	<0.060	<0.900

*** $p < .001$

Assessment of Reliability and Validity

The proposed model showed support for both reliability and validity. In regard to reliability, the indices of Cronbach's alpha and composite reliability were employed to estimate the internal consistency of the observed variables for their underlying latent constructs. The results of the internal consistency analyses showed all constructs had a Cronbach's alpha above 0.60 (i.e., the threshold of the internal consistency reliability (DeVillis, 2003; Fornell & Larcker, 1981; Gliner, Morgan, & Leech, 2009; Modi & Quittner, 2003); therefore, internal consistency reliability was found for these constructs (Table 4-22). Composite reliability was also conducted to measure the internal consistency of the observed variables of the constructs. The threshold of composite reliability was greater than 0.7 (Hair et. al, 1998). Two constructs with ordered categorical variables (i.e., cultural self-identification, personal cultural exposure and interaction) didn't indicate composite reliability since no indicator measurement error was estimated in the WLSMV estimation of the CFA analysis. The composite reliability values of the estimated constructs ranged from 0.767 to 0.944 (Table 4-22), which provided evidence for reliability.

With regard to validity, convergent validity and discriminant validity are two subtypes that provide evidence for construct validity (Trochim, 2001). Convergent validity refers to the extent of observed variables converging on the same concept that the researcher intends to measure (Trochim, 2001). Convergent validity is tested by factor loading values that are higher than 0.5 (Kalema, Olugbara, & Kekwaletswe, 2011; Said, Badru, & M, 2011).

As shown in Table 4-22, all observed variables have significant factor loading values with t-values ranging from 7.827 to 88.207 ($p < .001$) and standardized factor loading ranging from 0.512 to 0.901, thereby providing evidence of convergent validity.

Furthermore, the average variance extracted (AVE) of a construct ought to be greater than its measurement error variance; it should be greater than 0.5 (Kalema, Olugbara, & Kekwaletswe, 2011). Two constructs (i.e., cultural self-identification, personal cultural exposure and interaction) were the ordered categorical variables that didn't estimate an indicator measurement error in the WLSMV estimation of the CFA analysis; thus, they didn't estimate AVE. The other three constructs had an AVE value of greater than 0.5 (Table 4-22); accordingly, this supported convergent validity.

Table 4-22. The Summary of Reliability and Validity Analyses

Construct & Indicator	Standardized Factor Loading	t-value	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
Cultural Self-Identification			.628	N/A ^a	N/A
Ethnic identity	.714	9.899***			
Belief in Tsou values	.817	17.280***			
Ethnic pride	.733	12.035***			
Personal Cultural Exposure and Interaction			.691	N/A	N/A
Language usage	.754	19.327***			
Music preference	.822	17.589***			
Food preference	.694	15.520***			
Friends' ethnic groups	.533	10.857***			
Perceived Conformity to Principles of Indigenous Ecotourism and Ecotourism			.944	.944	.630
Be in accordance with Tsou culture and values	.792	40.519***			
Promote the practice of Tsou customs	.788	39.167***			
Manage Tsou cultural property	.818	45.780***			
Be controlled by local Tsou people	.700	25.398***			
Integrate well with the Tsou tribe	.858	45.433***			
Determine the use of resources	.721	27.797***			
Improve the respect for Tsou culture	.810	44.657***			
Provide positive experiences for local residents	.831	47.630***			
Provide funding for conservation	.775	39.249***			
Be appropriate for local conditions	.831	45.230***			

^a It is not available because the ordered categorical variables didn't estimate an indicator measurement error in the WLSMV estimation of the CFA analysis.

*** $p < .001$

Table 4-22 (cont'd)

Construct & Indicator	Standardized Factor Loading	t-value	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
Perceived Positive Cultural Impact of Ecotourism			.927	.931	.730
Preserve Tsou cultural heritage	.890	66.956***			
Preserve and inherit local cultural activities	.901	88.207***			
Preserve and inherit local traditional crafts	.882	73.375***			
Enhance the team spirit of the community	.760	31.906***			
Make local residents learn more about Tsou culture	.829	49.758***			
Perceived Negative Cultural Impact of Ecotourism			.770	.767	.704
Replace Tsou people's values with tourists' cultural values	.790	9.453***			
Tourists do not respect the customs and habits of local residents	.731	9.555***			
The amount of Tsou language being spoken among local residents has decreased	.639	9.231***			
The local culture demonstrated to tourists has been different than the authentic Tsou culture	.512	7.287***			

^a It is not available because the ordered categorical variables didn't estimate an indicator measurement error in the WLSMV estimation of the CFA analysis.

*** $p < .001$

Discriminant validity refers to the degree of a construct discriminating from the other dissimilar constructs (Farrell, 2009, Trochim, 2001). A paired constructs test was employed to examine the discriminant validity between different constructs in the study. The process of the paired constructs test includes constraining the parameter estimate between two constructs to be one in a constrained model, and subsequently comparing the differences in chi-square values with an unconstrained model that has the parameter freely estimated for the same two constructs (Anderson and Gerbing, 1988; Farrell, 2009). If the chi-square difference between the constrained model and unconstrained models exceeds $\chi^2 (1) = 3.841$, then discriminant validity between the two constructs is indicated (Anderson and Gerbing, 1988; Farrell, 2009). Because the chi-square value for the WLSMV estimation cannot be used for the regular chi-square difference testing, the study employed the DIFFTEST option in Mplus in conducting the chi-square difference test for the WLSMV estimation. In the DIFFTEST option, if the chi-square value exceeds $\chi^2 (1) = 3.841$, discriminant validity between the constrained model and unconstrained models is evidenced. Among the five constructs of the study, the approach of paired constructs test was conducted in the ten construct pairs using the DIFFTEST approach. The test result showed that all of the chi-square values of the ten construct pairs exceeded $\chi^2 (1) = 3.841$ (Table 4-23); thereby, the discriminant validity between the five constructs of the study was evidenced.

Table 4-23. Chi-Square Test for Assessing Discriminant Validity using the DIFFTEST approach in Mplus with Standardized Results

Construct Pair	Chi-Square Test for Difference Testing
	Chi-Square $\chi^2(1)$
Cultural Self-Identification, Personal Cultural Exposure and Interaction	45.941 ***
Cultural Self-Identification, Perceived Conformity to Principles	231.861 ***
Cultural Self-Identification, Perceived Positive Cultural Impact	123.443 ***
Cultural Self-Identification, Perceived Negative Cultural Impact	62.507 ***
Personal Cultural Exposure and Interaction, Perceived Conformity to Principles	271.471 ***
Personal Cultural Exposure and Interaction, Perceived Positive Cultural Impact	153.544 ***
Personal Cultural Exposure and Interaction, Perceived Negative Cultural Impact	68.319 ***
Perceived Conformity to Principles, Perceived Positive Cultural Impact	4.733 *
Perceived Conformity to Principles, Perceived Negative Cultural Impact	115.981 ***
Perceived Positive Cultural Impact, Perceived Negative Cultural Impact	56.398 ***

*p < .05, *** p < .001

Overall, all of the five constructs of the entire proposed model of the study provided evidence of internal consistency reliability, convergent validity, and discriminant validity; this indicating that the proposed model possessed construct reliability and validity. Next, the hypotheses were tested with a SEM analysis and multiple regression analysis.

Testing the Hypothesized Structural Equation Model

Structural Equation Modeling (SEM) is widely utilized in recent research because it is capable of examining the causal relationships among constructs that account for the influence of measurement errors (Raykov & Marcoulides, 2006; Wang & Wang, 2012). Accordingly, it facilitates the prevention of incorrect conclusions due to measurement errors (Raykov & Marcoulides, 2006; Wang & Wang, 2012). SEM also enables researchers to examine hypotheses for both direct and indirect effects (Raykov & Marcoulides, 2006). The study employed SEM to examine the hypotheses of relationships including direct and indirect effects among the five constructs of the study. The structural model results that examined the model fit and hypotheses appear later.

Testing the Structural Equation Model

The study examined the directional (causal) relationships among the five constructs in the proposed model to estimate the structural regression model of the study using the WLSMV estimation. The model assessment results showed that the structural regression model's good-fit indices had values in the recommended range. ($\chi^2/df = 1.452$; CFI = 0.933; TLI = 0.924; RMSEA = 0.038; WRMR = 0.815) (Table 4-24). The chi-square test of model fit for the structural regression model was significant because of the large sample size. Accordingly, the structural regression model had a good fit to the data set and was acceptable.

Table 4-24. Summary of Structural Regression Model Assessment

	χ^2	χ^2/df	CFI	TLI	RMSEA	WRMR
The Proposed Model	419.704	1.452***	0.933	0.924	0.038	0.815
Recommended Value	N/A ^a	<3.000	>0.900	>0.900	<0.060	<0.900

^a There is no recommended value for it.

*** $p < .001$

Analysis of the Study Hypotheses using SEM analysis

There were four general hypotheses tested in the study. These general hypotheses consisted of several specific sub-hypotheses. Three of the general hypotheses were tested using the SEM analysis with the WLSMV estimation. The results of these tests are presented below.

Hypothesis 1

Residents' acculturation does not affect their perceived cultural impact.

Hypothesis 1-a

Residents' acculturation of their cultural self-identification does not negatively affect the residents' perceived positive cultural impact.

This null hypothesis (H1a) was rejected at $p < .05$ (Table 4-25). The result indicated that residents' acculturation on their cultural self-identification significantly and negatively affected the residents' perceived positive cultural impact ($\beta = -.227$, $p < .05$). This result provided evidence that the residents retaining more Tsou cultural identity in themselves tended to perceive a greater degree of positive cultural impact from ecotourism development.

Hypothesis 1-b

Residents' acculturation of their personal cultural exposure and interaction does not positively affect the residents' perceived positive cultural impact.

This null hypothesis (H1b) was rejected at $p < .05$ (Table 4-25). The result indicated that residents' acculturation on their personal cultural exposure and interaction significantly and positively affected the residents' perceived positive cultural impact ($\beta = .232, p < .05$). This result provided evidence that, in cultural exposure and interaction, the residents accepting more of Plain People's culture tended to perceive a greater degree of positive cultural impact from ecotourism development.

Hypothesis 1-c

Residents' acculturation of their cultural self-identification does not positively affect the residents' perceived negative cultural impact.

This null hypothesis (H1c) was not rejected at $p < .05$ (Table 4-25). The result indicated the lack of a statistically significant positive relationship between residents' acculturation on their cultural self-identification and their perceived negative cultural impact ($p > .05$). This result showed there was not enough evidence to support that the residents retaining more Tsou cultural identity in themselves would tend to perceive a greater degree of negative cultural impact from ecotourism development.

Hypothesis 1-d

Residents' acculturation of their personal cultural exposure and interaction does not negatively affect the residents' perceived negative cultural impact.

This null hypothesis (H1d) was not rejected at $p < .05$ (Table 4-25). The result indicated the lack of a statistically significant negative relationship between residents'

degree of acculturation on their personal cultural exposure and their perceived negative cultural impact ($p > .05$). This result showed there was not enough evidence to support that, in cultural exposure and interaction, the residents accepting more of Plain People's culture would tend to perceive a lesser degree of negative cultural impact on ecotourism development.

Hypothesis 2

Residents' perception of ecotourism development that conforms to indigenous ecotourism and ecotourism principles does not affect the residents' perceived cultural impact.

Hypothesis 2-a

Residents' perceived ecotourism development that conforms to indigenous ecotourism and ecotourism principles does not positively affect the residents' perceived positive cultural impact.

This null hypothesis (H2a) was rejected at $p < .001$ (Table 4-25). The result indicated that residents' perceived ecotourism development that conformed to indigenous ecotourism and ecotourism principles significantly and positively affected the residents' perceived positive cultural impact ($\beta = .836$, $p < .001$). This result provided strong evidence that the residents perceiving a greater degree of ecotourism development that conformed to indigenous ecotourism and ecotourism principles tended to perceive a greater degree of positive cultural impact from ecotourism development.

Hypothesis 2-b

Residents' perceived ecotourism development that conforms to indigenous ecotourism and ecotourism principles does not negatively affect the residents' perceived negative cultural impact.

This null hypothesis (H2b) was not rejected at $p < .05$ (Table 4-25). The result indicated that the lack of a statistically significant negative relationship between residents' perceived ecotourism development that conformed to indigenous ecotourism and ecotourism and the residents' perceived negative cultural impact ($p > .05$). This result showed that there was not enough evidence to support that residents perceiving a greater degree of ecotourism development that conformed to indigenous ecotourism and ecotourism principles would tend to perceive a lesser degree of negative cultural impact on ecotourism development.

Hypothesis 3

Residents' acculturation does not affect their perception of ecotourism development that conforms to indigenous ecotourism and ecotourism principles.

Hypothesis 3-a

Residents' acculturation of their cultural self-identification does not negatively affect the residents' perceived ecotourism development that conforms to indigenous ecotourism and ecotourism principles.

This null hypothesis (H3a) was rejected at $p < .001$ (Table 4-25). The result indicated that residents' acculturation on their cultural self-identification significantly and negatively affected the residents' perceived ecotourism development that conforms to indigenous ecotourism and ecotourism principles. ($\beta = -.618$, $p < .001$). This result provided strong evidence that the residents retaining more Tsou cultural identity in

themselves tended to perceive a greater degree of ecotourism development that conforms to indigenous ecotourism and ecotourism principles.

Hypothesis 3-b

Residents' acculturation of their personal cultural exposure and interaction does not positively affect the residents' perceived degree of ecotourism development that conforms to indigenous ecotourism and ecotourism principles.

This null hypothesis (H3b) was rejected at $\alpha p < .05$ (Table 4-25). The result indicated that residents' acculturation on their personal cultural exposure and interaction significantly and positively affected the residents' perceived ecotourism development that conforms to indigenous ecotourism and ecotourism principles. ($\beta = -.618, p < .05$). This result provided evidence that, in cultural exposure and interaction, the residents accepting more of the Plain People's culture tended to perceive a greater degree of ecotourism development that conforms to indigenous ecotourism and ecotourism principles.

In sum, as shown in Table 4-25 and Figure 4-2, data supported the rejection of several hypotheses that found significant relationships between acculturation and positive cultural impacts. The data did not support that acculturation influenced negative cultural impacts.

Table 4-25. Summary of Analysis of the Study Hypotheses Using SEM analysis with Standardized Results

Hypothesized Path	Path Coefficient (β)	t-value	Null Hypotheses
H1-a: Cultural Self-Identification → Perceived Positive Cultural Impact	-0.227	-2.205 *	Reject
H1-b: Personal Cultural Exposure and Interaction → Perceived Positive Cultural Impact	0.232	2.566 *	Reject
H1-c: Cultural Self-Identification → Perceived Negative Cultural Impact	0.199	0.996	Not reject
H1-d: Personal Cultural Exposure and Interaction → Perceived Negative Cultural Impact	-0.072	-0.390	Not reject
H2-a: Perceived Conformity to Principles → Perceived Positive Cultural Impact	0.836	23.287 ***	Reject
H2-b: Perceived Conformity to Principles → Perceived Negative Cultural Impact	-0.076	-0.965	Not reject
H3-a: Cultural Self-Identification → Perceived Conformity to Principles	-0.618	-3.946 ***	Reject
H3-b: Personal Cultural Exposure and Interaction → Perceived Conformity to Principles	0.338	2.149 *	Reject

*p < .05, ***p < .001

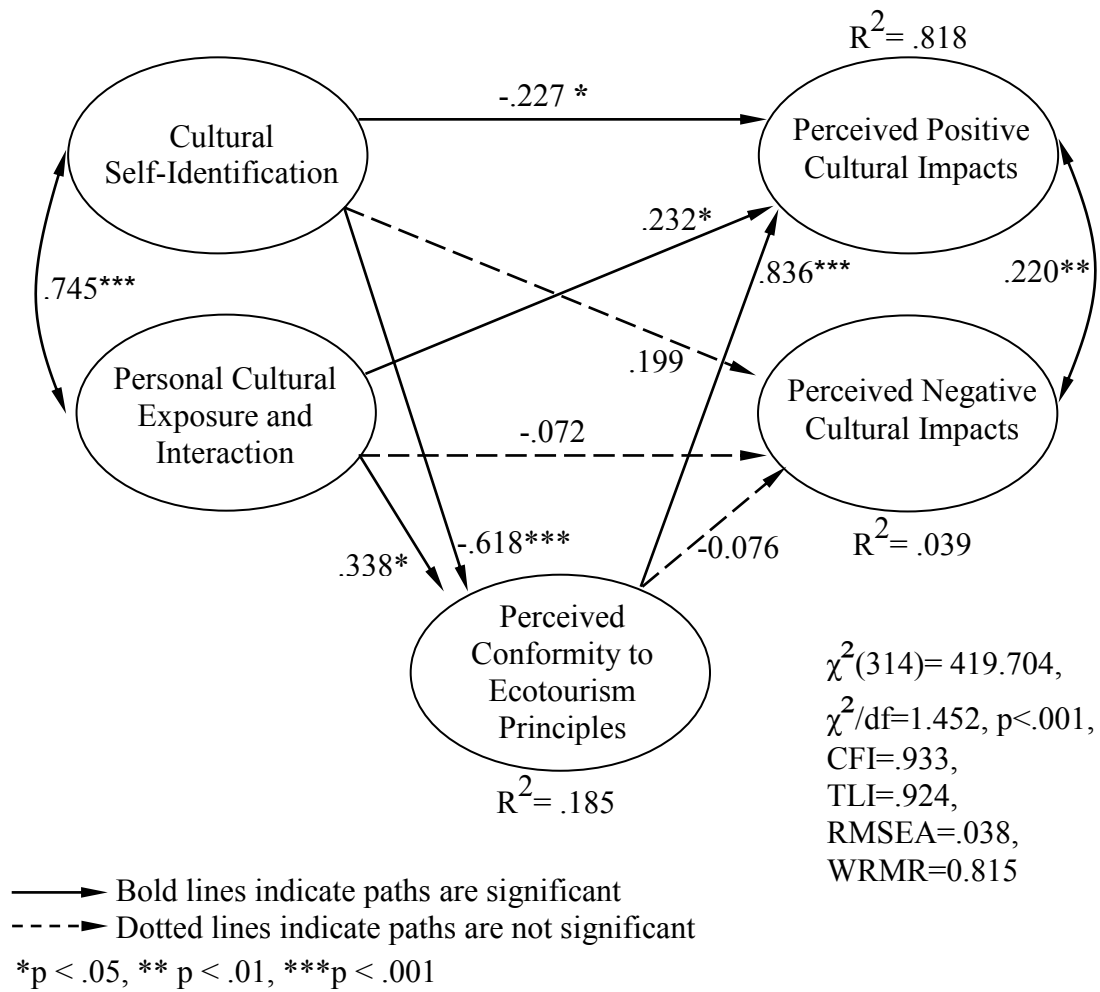


Figure 4-2. Results of Testing the SEM Model With Standardized Path Coefficients

Analysis of the Indirect Effects

This study also examined the indirect effects between the two factors (i.e., cultural self-identification, personal cultural exposure and interaction) of residents' degrees of acculturation and the degree of the residents' perceived cultural impact of ecotourism development. Ecotourism development that conformed to indigenous ecotourism and ecotourism principles is a mediator for positive cultural impacts, but not negative. The results of the indirect effect analyses indicated that the two cause-effect relationships referring to the degree of residents' perceived positive cultural impact rejected their null hypotheses. These results indicated that there was a significant negative indirect effect ($\beta = -.517, p < .001$) from residents' degrees of acculturation on their cultural self-identification on the degree of the residents' perceived positive cultural impact. A significant positive indirect effect ($\beta = .283, p < .05$) was found from residents' degrees of acculturation on their personal cultural exposure and interaction on the degree of residents' perceived positive cultural impact (Table 4-26). The two cause-effect relationships referring to the degree of residents' perceived negative cultural impact was insignificant and the null hypothesis was not rejected. These results indicated the lack of a statistically significant indirect effect ($p > .05$) between the factors of residents' degrees of acculturation and the degree of the residents' perceived negative cultural impact in ecotourism development with the mediator of perceiving the degree of ecotourism development that conformed to indigenous ecotourism and ecotourism principles (Table 4-26).

Table 4-26. Summary of the Indirect Effect Analysis with Standardized Results

Hypothesized Path	The Indirect Effect with the Mediator of Perceived Conformity to Principles of Indigenous Ecotourism and Ecotourism		
	Path Coefficient (β)	t-value	Null Hypotheses
H1-a: Cultural Self-Identification → Perceived Positive Cultural Impact	-0.517	-4.079 ***	Reject
H1-b: Personal Cultural Exposure and Interaction → Perceived Positive Cultural Impact	0.283	2.196 *	Reject
H1-c: Cultural Self-Identification → Perceived Negative Cultural Impact	0.047	0.997	Not reject
H1-d: Personal Cultural Exposure and Interaction → Perceived Negative Cultural Impact	-0.026	-0.984	Not reject

*p < .05, ***p < .001

Analysis of the Study Hypothesis Using the Multiple Regression Analysis

There were four general hypotheses with specific sub-hypotheses tested in the study. One general hypothesis was tested using the multiple regression analysis. The result of the test is presented below.

Hypothesis 4

Acculturation indicators are unrelated to two levels of acculturation – assimilation and integration.

Hypothesis 4-a

The indicators of acculturation are not positively related to the indicator of the definition of assimilation.

The estimated multiple regression model showed no multicollinearity issues in the independent variables (Tolerance > .5; VIF < 2). The multiple regression analysis was employed to examine the relationships between the eight indicators of acculturation and the indicator of the definition of assimilation. The result of the multiple regression analysis showed that one indicator of acculturation (i.e., ethnic identity) rejected the null hypothesis at $\alpha p < .001$ (Table 4-27). This result showed that the indicator of ethnic identity significantly and positively related to the indicator of the definition of assimilation ($\beta = .539, p < .001$). This result provided evidence that the indicator of ethnic identity reflected the definition of assimilation well.

Table 4-27. Testing Relationship between the Indicators of Acculturation and the Indicator of the Definition of Assimilation

Dependent Variable: Extent of Becoming Like the Plain People			
Independent Variable: Degree of Acculturation Items	B	Std. Error	T-Value^a
Ethnic identity	.539	.109	4.931***
Belief in Tsou values	-.002	.127	-.017
Ethnic pride	.029	.100	.289
Language usage	.164	.096	1.702
Music preference	.077	.126	.610
Food preference	.028	.115	.246
Participation in Tsou ceremonies	-.054	.068	-.797
Friends' ethnic groups	.116	.081	1.434
R Square: .167			

***p < .001

^a Tolerance > .5; VIF < 2

Hypothesis 4-b

The indicators of acculturation are not positively related to the indicator of the definition of integration.

The estimated multiple regression model showed no multicollinearity amongst the independent variables (Tolerance > .5; VIF < 2). The result of the multiple regression analysis indicated that three indicators of acculturation (i.e., ethnic identity, music preference, friends' ethnic groups) rejected the null hypothesis at α p < .01, p < .01, and p < .001 respectively (Table 4-28). This result showed that the indicators of ethnic identity (β = .292, p < .01), music preference (β = .364, p < .01), and friends' ethnic groups (β = .307, p < .001) were significantly and positively related to the indicator of the definition of integration. This result provided evidence that the indicators of ethnic identity, music preference, and friends' ethnic groups reflected the definition of the degree of integration well.

Table 4-28. Testing Relationship between the Indicators of Acculturation and the Indicator of the Definition of Integration

Dependent Variable: Extent of Adapting to the Plain People's Culture			
Independent Variable: Degree of Acculturation Items	B	Std. Error	T-Value^a
Ethnic identity	.292	.108	2.702**
Belief in Tsou values	.034	.126	.273
Ethnic pride	-.055	.099	-.555
Language usage	.052	.095	.549
Music preference	.364	.125	2.911**
Food preference	-.063	.114	-.551
Participation in Tsou ceremonies	.002	.067	.033
Friends' ethnic groups	.307	.080	3.833***
R Square: .181			

** $p < .01$, *** $p < .001$

^a Tolerance $> .5$; VIF < 2

Overall, as shown in Tables 4-27 and 4-28, in the multiple regression analysis, one indicator (i.e., ethnic identity) of acculturation reflected the definition of assimilation well, and three indicators (i.e., ethnic identity, music preference, friends' ethnic groups) of acculturation reflected the definition of integration well.

This chapter presented the results of the data analysis, which consists of a profile of detailed descriptions of the respondents; item analysis and normality test; the measurement of the model fit; reliability and validity examination; and testing hypotheses. Next, the chapter five introduces the discussions and conclusions of the study.

CHAPTER 5

DISCUSSION AND CONCLUSIONS

This final chapter provides a discussion of the key findings from the study. The theoretical and managerial implications of these findings are also presented. Several limitations of the findings are discussed. Finally, recommendations for future research are provided.

Discussion of Key Findings

In the first general hypothesis, based on the acculturation theory, Gartner's view of tourist-induced acculturation (1996) indicated that the interaction of tourist and host cultures triggers acculturation that induces changes in the host culture and causes a variety of cultural impacts. Nevertheless, to date, there have been no published studies to verify the relationship between acculturation and the cultural impacts of ecotourism. According to acculturation theory (Berry, 1980, 2003; Redfield, Linton, & Herskovits, 1936) and Gartner's (1996) view of tourist-induced acculturation, the study proposed the null hypotheses that the factors (i.e., cultural self-identification, personal cultural exposure and interaction) of residents' acculturation do not affect residents' perceived cultural impact.

The study found two significant findings regarding the relationships among the factors of residents' acculturation and residents' perceived cultural impacts. First, the cultural self-identification factor of residents' acculturation negatively affected residents' perceived positive cultural impact. This finding indicated that the cultural self-identification factor was a determinant for the residents' perceived positive cultural

impact. This result revealed that when residents retain more Tsou cultural identity (i.e., identify themselves more as members of the Tsou people, believe more in the values of the Tsou people, increasingly pride themselves on being a member of the Tsou people), they are likely to perceive a higher degree of positive cultural impact from ecotourism. The second finding was that the factor of personal cultural exposure and interaction of acculturation positively affected the degree of the residents' perceived positive cultural impact. This finding indicated that the factor of personal cultural exposure and interaction was a predictor for residents' perceived positive cultural impact. This result indicated that when the residents accept more of the Plain people's culture in personal cultural exposure and interactions (i.e., speak Chinese better, accept more of the Plain people's music and food, have more friends who are members of the Plain people), they are likely to perceive a higher degree of positive cultural impact from ecotourism.

The study also examined the indirect effects from the two factors (i.e., cultural self-identification, personal cultural exposure and interaction) of acculturation on perceived cultural impact from ecotourism development with the mediator of conformity (i.e., perceiving ecotourism development that conformed to indigenous ecotourism and ecotourism principles). The study results had two significant findings. First, the cultural self-identification factor had a negative indirect effect on the residents' perceived positive cultural impact, which was stronger than the direct effect. Second, the factor of personal cultural exposure and interaction had a positive indirect effect on the residents' perceived positive cultural impact, which was also stronger than the direct effect. For the two indirect effects, the conformity factor was shown to be an important mediator.

The above findings reinforced acculturation theory in that the interaction of different cultures may cause or lead to cultural change (Berry, 1980, 2003; Marín & Gamba, 2003;

Redfield, Linton, & Herskovits, 1936), and supported Gartner's view (1996) that tourist-induced acculturation may form or stimulate cultural impacts. These findings not only identified two factors of acculturation (i.e., cultural self-identification, personal cultural exposure and interaction) that had direct and indirect effects on residents' perceived positive cultural impact, but also verified the directions of the direct and indirect effects of the two acculturation factors (i.e., cultural self-identification with negative effects, personal cultural exposure and interaction with positive effects) on the residents' perceived positive cultural impact.

With regard to the second general hypothesis, it's a theoretical possibility that the ecotourism developments in an indigenous tribe that are in accordance with the principles of indigenous ecotourism and ecotourism will enhance the positive impacts and mitigate the negative impacts of ecotourism development. However, very few studies have provided evidence to verify that complying with these principles will cause a greater degree of positive cultural impact and a lesser degree of negative cultural impact to be perceived. In order to verify the effects of the recommended principles of indigenous ecotourism and ecotourism (Smith, 1999; TIES, 2012; Turner, Berkes, & Turner, 2012; Zeppel, 2006) on cultural impacts, the study hypothesizes: ecotourism development that conforms to indigenous ecotourism and ecotourism principles does not affect perceived cultural impact.

One significant finding was verified in the second general hypothesis. This significant finding was the conformity to indigenous ecotourism principles is a substantial determinant of residents' perceived positive cultural impact. The conformity factor had a strong positive direct effect ($\beta = .836$) on residents' perceived positive cultural impact. This finding reinforced the effect of the recommended principles of indigenous

ecotourism and ecotourism (Smith, 1999; TIES, 2012; Turner, Berkes, & Turner, 2012; Zeppel, 2006) on ecotourism cultural impact.

Aside from this, the study results showed that the degree of residents' perceived negative cultural impact was less than the degree of their perceived positive cultural impact. In addition, perceived negative cultural impact did not have any statistically significant relationship with the other constructs. These results were consistent with Andereck et al. (2007) who found that the negative impact quality of life impact had a lesser degree of satisfaction on tourism. These results were also consistent with Andereck and Vogt (2000) who found that perceived negative impacts had little effect on support for tourism development. The findings that negative cultural impacts were not found to be related to other factors in the model may attribute to the study sample expressing a neutral opinion about negative impacts. Culturally it may be inappropriate to think or express negative opinions or respondents may have been thinking about the consequences of disliking negative impacts.

Based on the literature review, the study proposed the two factors (i.e., cultural self-identification, personal cultural exposure and interaction) of residents' degrees of acculturation and how they affect the degree of the residents' perceived cultural impact. In regard to the third general hypothesis, on the other hand, these two acculturation factors may also affect residents' attitudes toward ecotourism operations. Nevertheless, to date, there is no published study to verify the effects of these two acculturation factors on residents' attitudes toward the processes of ecotourism operations. To verify this effect, the study hypothesized that the acculturation factors do not affect residents' perceived ecotourism development that conforms to indigenous ecotourism and ecotourism principles.

In the third general hypothesis, two significant findings were verified. The first significant finding is that the cultural self-identification factor negatively affected conformity. This result revealed that when the residents retain more Tsou cultural identity (i.e., identify themselves more as members of the Tsou people, believe more in the values of the Tsou people, increasingly take pride in being a member of the Tsou people), they are likely to perceive a higher degree of ecotourism development conformity. The second significant finding is that the factor of personal cultural exposure and interaction of acculturation positively affected residents' perceived ecotourism development that conforms to indigenous ecotourism and ecotourism principles. This result indicated that when the residents accept more of the Plain people's culture for personal cultural exposure and interactions (i.e., speak Chinese better, accept more of the Plain people's music and food, have more friends who are members of the Plain People), they are likely to perceive a higher degree of ecotourism development that conforms to indigenous ecotourism and ecotourism principles.

These two significant findings indicated that the two factors (i.e., cultural self-identification, personal cultural exposure and interaction) of residents' degrees of acculturation were the determinants of residents' perceived degree of ecotourism development that conforms to indigenous ecotourism and ecotourism principles. The findings demonstrated that the cultural self-identification factor had a negative direct effect and the personal cultural exposure and interaction factor had a positive direct effect on the factor of ecotourism development that conformed to indigenous ecotourism and ecotourism principles. These findings can be interpreted as follows: the residents retaining more Tsou cultural identity and who accept more of the Plain people's culture for personal cultural exposure and interactions tend to possess more positive attitudes

toward ecotourism operations; therefore, they tend to perceive a higher degree of ecotourism development that conforms to indigenous ecotourism and ecotourism principles.

With respect to the final general hypothesis, this study attempted to identify the acculturation indicators that well reflect the definition of acculturation. The study results showed that, of the eight acculturation indicators, the indicator of ethnic identity had a significant and positive relationship to the assimilation-related indicator; thereby, the ethnic identity indicator well reflected the definition of assimilation. In addition, the study results revealed that three acculturation indicators (i.e., ethnic identity, music preference, friends' ethnic groups) had a significant and positive relationship to the integration-related indicator; hence, these three indicators well reflected the definition of integration.

Theoretical Implications

This study presents an exploratory study of some of the processes and mechanisms that form the cultural impacts of ecotourism development. The study results had several theoretical implications for acculturation-related research and this mechanism that shapes the cultural impacts of ecotourism development. First theoretical implication, the study is one of the few that has applied the acculturation theory to the study of tourism and ecotourism topics. The results of the study identified, in the field of ecotourism, two factors (i.e., cultural self-identification, personal cultural exposure and interaction) of residents' degrees of acculturation with direct and indirect effects on the degree of the residents' perceived positive cultural impact. When these two factors were integrated into one factor, this one factor did not indicate a statistically significant relationship with the residents' perceived positive cultural impact. This finding verified that two dimensions of acculturation (i.e., cultural self-identification, personal cultural exposure and interaction) induced residents' perceived positive cultural impact in the field of ecotourism. This finding contributed to extending the existing acculturation literature on ecotourism and the establishment of the theoretical basis of ecotourism acculturation mechanisms.

Second theoretical implication, these two factors of the degree of acculturation showed different directions of the direct and indirect effects on perceived positive cultural impact, on which the cultural self-identification factor had a negative effect and personal cultural exposure and interaction had a positive effect. These different directions of the two acculturation factors indicated that the effects of acculturation on retaining more Tsou cultural identity and accepting more of the Plain people's culture for personal cultural exposure and interactions were both likely to produce a greater degree of perceived positive cultural impact. This finding indicated that an individual is capable of

connecting two cultures independently. This finding is not consistent with the traditional view of acculturation. In the traditional view of acculturation, acculturation is a unidimensional process in which an individual's original culture is on one side of and the receiving culture is on the other side of a continuum (Schwartz et al., 2010).

On the contrary, this finding provided empirical evidence to support that an individual is capable of feeling part of more than one culture simultaneously. This finding supported Berry's (1980, 2003) view of the integration process of acculturation that occurs when individuals retain their native cultural identity while moving toward being an integral part of the dominant culture. This finding also reinforced the orthogonal cultural identification theory, which proposed that the degree of an individual's connection with different cultures is orthogonal, uncorrelated, and independent (Oetting, 1993; Oetting & Beauvais, 1990–91; Oetting, Swaim, & Chiarella, 1998; Rust, 2007). In the view of orthogonal cultural identification theory, the benefit of an individual's linkage with a culture is to satisfy her/his need in cultural interactions (Oetting, 1993; Oetting, Swaim, & Chiarella, 1998). Thereby, when an individual has linkages with several cultures, she/he is likely to obtain more benefits and to perceive more satisfaction of her/his needs in interactions with several cultures. This view is consistent with the study results that showed residents retaining more Tsou cultural identity and accepting more of the Plain people's culture for personal cultural exposure and interactions were likely to perceive a greater degree of positive cultural impact.

This finding indicated that researchers may need to consider estimating the degree of acculturation for an individual who independently links to several cultures. To estimate the degree of acculturation with independent linkages with several cultures, several acculturation researchers have suggested estimating the degree of acculturation for each

culture independently (Kang, 2006; Schwartz et al., 2010). This suggestion seemingly does not estimate the degree of changing the original culture, but estimates the level of embracing multiple cultures, which is involved in the paradigm shift of the acculturation theory. Furthermore, instead of estimating an individual's level of embracing multiple cultures, the reason that some individuals can only accept one culture but others can accept more than one culture is a topic that may contribute to a better understanding of the mechanisms that form individuals' attitudes toward cultures.

Third theoretical implication, the study results showed that the two factors of acculturation both had greater indirect effects than the direct effects on residents' perceived positive cultural impact. This finding indicated the importance of the indirect effects from the factors of the degree of acculturation on residents' perceived positive cultural impact. The results also showed that the conformity factor was an important mediator for inducing perceived positive cultural impact. It also indicated that acculturation factors may have greater indirect effects than direct effects; thereby, the research relevant to the acculturation effect needs to consider the indirect effects of acculturation factors.

Fourth theoretical implication, the study verified that the residents who perceive a greater degree of ecotourism development that conforms to indigenous ecotourism and ecotourism principles also tend to perceive a greater degree of positive cultural impact from ecotourism development. This finding was consistent with the expectation of the effects of these indigenous ecotourism and ecotourism principles (Smith, 1999; TIES, 2012; Turner, Berkes, & Turner, 2012; Zeppel, 2006), and also justified these principles.

Fifth theoretical implication, the findings of the study verified the relationships among the factors of the degree of acculturation, ecotourism development conforming to

indigenous ecotourism and ecotourism principles, and positive cultural impact. To date, there is no published study that clarifies processes or mechanisms that shape cultural impacts. These findings also provided empirical evidence to support Gartner's view (1996) of tourist-induced acculturation.

Final theoretical implication, the study found that the ethnic identity indicator well reflected the definition of assimilation, and the indicators of ethnic identity, music preference, and friends' ethnic groups well reflected the definition of integration. These findings are consistent with the expectations for these acculturation indicators (Berry, 1980, 2003; Deng & Walker, 2007; Manrai & Manrai, 1995; Suinn *et al.*, 1992). The findings also provide empirical evidence to justify these indicators as suitable to estimate the degree of assimilation or integration in acculturation-related research.

Managerial Implications

The study assessed residents' degree of acculturation, residents' degree of perceived positive and negative cultural impact, and the degree of ecotourism development that conformed to the principles of indigenous ecotourism and ecotourism. This study also clarified a mechanism forming the positive cultural impact of ecotourism development. These results have the following primary managerial implications. First, based on the literature review, the study developed two factors of the degree of acculturation. The cultural self-identification factor with three indicators (i.e., ethnic identity, belief in Tsou values, ethnic pride) and the personal cultural exposure and interaction factor with four indicators (i.e., language usage, music preference, food preference, friends' ethnic groups) can be employed to estimate the degree of acculturation in two dimensions (i.e., cultural self-identification, personal cultural exposure and interaction) for ecotourism

development. These estimated results (i.e., cultural self-identification, personal cultural exposure and interaction) can be utilized to monitor the degree of acculturation for indigenous people's cultural self-identification and personal cultural exposure and interaction in order to protect the indigenous culture.

Second, the two factors of residents' perceived positive and negative cultural impact (each factor had five indicators) developed in the study can be used to assess the degree of cultural impact for ecotourism development in indigenous areas. The assessed results of the residents' perceived positive and negative cultural impacts can also be employed to monitor the degree of positive and negative cultural impact to protect the indigenous culture that is used to develop ecotourism.

Third, the developed construct of residents' perceived conformity to the principles of indigenous ecotourism and ecotourism had ten indicators. These indicators can be applied to measure whether an ecotourism operation is conforming to the principles of indigenous ecotourism and ecotourism. In addition, this construct had been verified to have a substantial positive effect on the residents' perceived positive cultural impact. Accordingly, managers (e.g., the operator of ecotourism) and residents can adjust their approaches to an ecotourism operation to conform to these ten indicators and have a greater degree of perceived positive cultural impact for the enhancement of their welfare. In the national level, government fundings can be provided for studying suitable principles for different types of ecotourism (e.g., community-based ecotourism, nature-based ecotourism). Government fundings can also be provided for certification programs to certify ecotourism destinations that conform to these principles.

Finally, the study clarified a mechanism forming the positive cultural impact of ecotourism development. This mechanism consisted of four constructs (i.e., cultural

self-identification, personal cultural exposure and interaction, ecotourism development conforming to indigenous ecotourism and ecotourism principles, and perceived positive cultural impact). The study results verified the direct and indirect effects among these four constructs. Managers (e.g., the operator of ecotourism) and residents can apply the results related to the direct and indirect effects to devise management strategies to increase the degree of perceived positive cultural impact for the enhancement of their welfare in ecotourism development. For instance, a operator of ecotourism can propose a project to improve residents' Tsou cultural self-identification (e.g., believe more in the values of the Tsou people, increasingly take pride in being a member of the Tsou people) in the Saviki community. According to the study results, this improvement will have positive direct and indirect effects on residents' perceived positive cultural impact. Thereby, these residents' could subsequently perceive a higher degree of positive cultural impact to enhance their welfare in ecotourism development. Taiwan's National Tourism policy has been supportive of ecotourism approaches to tourism development. As shown in this study of Tsou-lead tourism, ecotourism approaches were found to amplify positive cultural impacts. Thus, ecotourism should be present in future policy development, particularly as it applies to indigenous populations.

Limitations of the Findings

There were several limitations of the findings in the study. Three limitations have been pointed out in the chapter one: 1) the study results were absent of the long-term dynamic process of the phenomena of acculturation and cultural impact; 2) the study results may not be applicable to ecotourism destinations with a non-indigenous culture; and 3) the study results may be related to other factors outside the control of the

community and research. Aside from this, there are four additional limitations of the findings in the study. The first limitation is related to the development of the acculturation indicators. Although the scale development of the acculturation indicators in the study had considered indicators in more than sixty scales of acculturation, only seven acculturation indicators were finally employed in the analysis of the structural regression model. More acculturation indicators should be considered for adoption in this study. The reliability of the two factors of the degree of acculturation may be improved when more suitable acculturation indicators are added to the two factors.

The second limitation pertains to the loss of indicators. A pair of reverse-coded acculturation indicators (i.e., important level of not becoming a member of the Plain people, important level of becoming a member of the Plain people) was discarded in the study because, in the two indicators, more than thirty percent (30.5%) of the respondents provided inconsistent answers. There are two reasons that may cause this issue. First, some respondents expressed that the reverse-coded questions were too complicated to them, and as a result they may not be capable of answering these questions accurately. Second, several respondents expressed that they didn't like this type of question, which was likely to provoke Tsou people when asking about their attitudes toward becoming a member of the Plain people. This may cause them to refuse to provide their true answers for the reverse-coded questions.

The third limitation was related to the results of residents' perceived negative cultural impacts. The study results showed that the negative cultural impact construct did not have any statistically significant relationship with the other constructs. These insignificant results were consistent with some research that studied the negative impacts of tourism (Andereck et al.; 2007; Andereck & Vogt; 2000). Nevertheless, it may be

because the respondents didn't provide accurate responses. For instance, in the main survey, some respondents showed hesitation to express their opinions on these negative impact questions because they were worried about the other residents knowing that they had expressed negative attitudes toward the ecotourism development. Accordingly, privacy and confidentiality issues should be stressed in future indigenous research

The final limitation is that this study is limited by an inability to employ enough empirical studies and theories to develop the constructs for mechanisms forming perceived cultural impacts. This is because very few studies have introduced the mechanisms shaping perceived cultural impacts. In the study, the final model of the mechanism in the SEM analysis consisted of five constructs (i.e., two acculturation constructs, one construct of the principles of indigenous ecotourism and ecotourism, two constructs of perceived cultural impacts). Some other important constructs relevant to the mechanisms forming perceived cultural impacts in ecotourism may need to be added to the model.

Future Research

There are several recommendations for future research relevant to this study. First, in the scale development for the acculturation factors, the study developed two factors for estimating the degree of acculturation. The cultural self-identification factor had three indicators, and the personal cultural exposure and interaction factor had four indicators. In future research, more suitable acculturation indicators can be considered for addition to these two factors. In addition, other suitable acculturation factors can be considered for addition when assessing the degree of acculturation for ecotourism development. Furthermore, since individuals may independently connect with different cultures, future

acculturation research can consider estimating each culture independently (Kang, 2006; Schwartz et al., 2010). Nevertheless, estimating the degree of acculturation for each culture independently will increase the number of questions, which may decrease the response rate of the survey. Accordingly, suitable number of questions should be considered when a survey is developed for independently estimating the degree of acculturation for different cultures.

Second, the study found that some individuals were capable of connecting to more than one culture. This finding highlights the need for a better understanding of the reason why some individuals can only accept one culture but others can accept more than one culture. Accordingly, understanding the mechanism that forms individuals' attitudes toward cultures is recommended for future study.

Third, the study developed an examined model for a mechanism that forms perceived cultural impacts. This model consisted of five constructs (i.e., two acculturation constructs, one construct of the principles of indigenous ecotourism and ecotourism, two constructs of perceived cultural impacts). More important constructs relevant to this mechanism are recommended for addition to the model of this mechanism in future research.

Fourth, the study has identified the five most important positive cultural impacts and the five most important negative cultural impacts from ecotourism development in the Saviki community. The study also estimated the degree of residents' perceived positive and negative cultural impact for these ten cultural impacts. However, the monetary values of these cultural impacts are still unknown. Because of a lack of information regarding the monetary values of cultural impacts, managers may have difficulty determining suitable amounts of funding for cultural resource protection projects. Accordingly, the

monetary values of these cultural impacts should be estimated in future research.

Finally, even though the study has identified ten important positive and negative cultural impacts, and has also estimated the degree of residents' perceived cultural impacts for these ten cultural impacts, the acceptable or tolerated levels for these cultural impacts are still unknown. An individual may have a very low acceptable level of a negative cultural impact; therefore, they may not accept this negative cultural impact despite perceiving a low degree of this impact. Understanding the acceptable or tolerated levels for cultural impacts will facilitate the creation of strategies for maintaining cultural impacts at an acceptable level, and for preventing the overuse of cultural resources in ecotourism development. Accordingly, acceptable levels of cultural impacts should be studied in future research.

APPENDICES

Appendix A: English Survey for the Pilot Study

Number: _____

Date: _____

Saviki Community Cultural Impact Survey and Consent

MICHIGAN STATE	Adviser: Dr. Christine Vogt
UNIVERSITY	Ph.D. Candidate: Gwo-Bao Liou Department of Community, Agriculture, Recreation and Resource Studies Sponsor: CARRS Graduate Office, Michigan State University

Dear Saviki Community Resident:

I am a Ph.D. Candidate at Michigan State University in the USA. I am conducting my dissertation for the purpose of estimating the impacts of ecotourism on Tsou culture. You have been selected to participate in a research study, Ecotourism Cultural Impact Analysis. Only adult residents (i.e., 20 years old and over) living in the Saviki community are selected as the respondents. Your participation in this study will take about five minutes. This survey will ask you to report the five most important negative and positive cultural impacts in regard to ecotourism development in your community.

Potential Risks and Benefits

There is no known risk in participating in this study. The study results will benefit the residents of the Saviki community by 1) identifying cultural impacts of ecotourism; 2) clarifying the mechanisms that form cultural impacts of ecotourism; 3) estimating the degrees of acculturation; and 4) reviewing ecotourism development. The findings for this study can also be applied to the development of management strategies to protect Tsou culture.

Privacy and Confidentiality

In this survey, your responses will be anonymous. The information that you provide for data analysis and reporting results will also remain anonymous. The data will be stored in a locked room and destroyed five years after the analysis is completed.

Your Rights to Participate or Withdraw

Your participation is voluntary. You indicate your consent to participate in this research by completing this survey. Refusal to participate will involve no penalty or loss of benefits. You may choose not to answer specific questions or to stop participating at any time. Nevertheless, your comments are very important to protecting Tsou culture. We are very appreciative of your participation.

Your Rights to Review the Data

You can request to review, to make duplications of, to supplement or correct, to discontinue collection of, processing or use of, or deletion of your data at any time.

Contact Information

If you have any questions about this study, please contact the researcher, Gwo-Bao Liou, at liougwob@msu.edu, phone 0919-410-343 (Taiwan) and 1-517-355-3008 (USA). If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University's Human Research Protection Program at 1-517-355-2180, Fax 1-517-432-4503, or e-mail irb@msu.edu or regular mail at Olds Hall, 408 West Circle Drive #207, MSU, East Lansing, MI 48824.

Thank you very much for your help.

Gwo-Bao Liou

You indicate your willingness to participate in this research by completing this survey.

Saviki Community Cultural Impact Survey

1. Please rank the **FIVE** most important positive cultural impacts in regard to ecotourism development in Saviki Community. (*One being the most important; two, three, four, and five being less important*)

- _____ Tsou cultural heritage has been preserved.
- _____ Local traditional crafts have been preserved and inherited.
- _____ Local cultural activities have been preserved and inherited (e.g., Millet Ceremony, Taiwan Ku Fish Festival).
- _____ The team spirit of the community has been enhanced.
- _____ The self-esteem of the residents of the community has been enhanced.
- _____ The respect for Tsou culture has increased.
- _____ The amount of Tsou language being spoken among local residents has increased.
- _____ Local residents have learned more about Tsou culture.
- _____ The sharing of cultures and beliefs between residents and tourists has been encouraged.
- _____ The education and interpretation of Tsou culture for tourists have increased.
- _____ Other _____
- _____ Other _____
- _____ Other _____
- _____ Other _____
- _____ Other _____

2. Please rank the **FIVE** most important negative cultural impacts in regard to ecotourism development in Saviki Community. (*One being the most important; two, three, four, and five being less important*)

- _____ Tsou people's values have been replaced by tourists' cultural values.
- _____ The respect for Tsou culture has decreased.
- _____ Tsou's traditional ceremonies have changed.
- _____ Tsou culture has been modified to satisfy tourists' demands.
- _____ The local culture demonstrated to tourists has been different than the authentic Tsou culture.
- _____ There has been an increasingly tense atmosphere, since tourists do not respect the customs and habits of local residents.
- _____ The daily life of local residents has been intruded upon by tourists.
- _____ Conflicts between local residents and tourists have increased.
- _____ The amount of Tsou language being spoken among local residents has decreased.
- _____ The buildings of the community have gradually lost Tsou traditional features.
- _____ Other _____
- _____ Other _____
- _____ Other _____
- _____ Other _____
- _____ Other _____

編碼: _____
日期: _____

Appendix B: Chinese Survey for the Pilot Study
山美社區生態旅遊文化衝擊之調查研究參與同意書

MICHIGAN STATE UNIVERSITY	指導教授: 佛格克莉絲汀博士 博士候選人: 劉國寶 研究單位: 社區、農業、休閒遊憩與資源研究系 贊助單位: 美國密西根州立大學社區、農業、休閒遊憩與資源研究所
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親愛的山美社區居民：

我是美國密西根州立大學的博士候選人，正進行生態旅遊文化衝擊之博士論文研究。論文目的是為了評估生態旅遊對鄒族文化所帶來的衝擊。您被選為受訪者參與本項研究。此研究僅限 20 歲與以上的山美社區成年居民參與。您可能需要花費五分鐘的時間來完成問卷。本調查將請您對於生態旅遊在山美社區造成最重要的五個正面與負面文化衝擊進行討論。

潛在風險與效益

參與本研究沒有任何已知風險。本研究成果將提供山美社區居民之效益包括: 1) 了解生態旅遊對文化的衝擊可有那些面向; 2) 闡明生態旅遊對當地文化的衝擊機制; 3) 評估鄒族文化的變遷程度; 與 4) 檢視生態旅遊的發展方向。研究成果將有助於研擬保護鄒族文化的管理策略。

隱私與保密

您將以不具名的方式填答此問卷。在分析過程與成果報告中，您提供的訊息將維持匿名。您提供的資料將放置於上鎖的房間內。這些資料將於完成分析五年後銷毀。

參與和退出本調查的權利

本調查採志願式參與。您協助完成調查，表示您同意參與本研究。拒絕參與不會有任何處罰和損失。您可能選擇不回答某些問題，或在任何時候終止參與。然而，您的意見對保護鄒族文化很重要，我們十分感謝您的參與。

檢視您提供資訊的權利

您可以在任何時間要求查閱、複製、補充、更正、停止蒐集、停止處理、停止利用或刪除您提供的訊息。

聯絡資訊

如果您有任何關於此研究的問題，請聯絡研究人員：劉國寶。聯絡訊息是：liougwob@msu.edu (電子信箱)；聯絡電話：0919-410-343 (台灣)、1-517-355-3008 (美國)。如果您有問題、對參與研究的角色或權利有所意見、想獲得或提供更多訊息、或對此研究有所抱怨，您可以用具名或不具名的方式聯絡美國密西根州立大學的人類研究保護計畫室。聯絡訊息是：電話 1-517-355-2180 (美國)、傳真 1-517-432-4503 (美國)、電子信箱 irb@msu.edu 或寄信到 Olds Hall, 408 West Circle Drive #207, MSU, East Lansing, MI 48824, USA。

十分感謝您的協助

劉國寶敬上

您協助完成調查，表示您同意參與本研究

山美社區生態旅遊文化衝擊問卷調查

1.請選出前五項您認為發展生態旅遊對山美地區所造成最正面的文化影響（請用數字 1~5 來標明；1 代表最重要的正面影響，其次為 2, 3, 4, 5）。

- _____ 保護鄒族文化遺產
- _____ 傳承與保護在地傳統手工藝
- _____ 傳承與保護在地文化活動(例如: 小米祭、鯛魚節)
- _____ 增進山美社區的團隊合作精神
- _____ 增進山美社區居民的尊嚴
- _____ 增加對鄒族文化的尊重
- _____ 增加居民說鄒族語言的次數
- _____ 讓社區居民學習更多鄒族文化
- _____ 鼓勵社區居民分享鄒族的文化給遊客(例如: 鄒族歷史、鄒族信仰)
- _____ 增加對鄒族文化的教育解說給遊客
- _____ 其他 _____
- _____ 其他 _____
- _____ 其他 _____
- _____ 其他 _____
- _____ 其他 _____

2.請選出前五項您認為發展生態旅遊對山美地區所造成最負面的文化衝擊（請用數字 1~5 來標明；1 代表最大的負面衝擊，其次為 2, 3, 4, 5）。

- _____ 鄒族的文化價值被遊客的文化價值所取代
- _____ 減少對鄒族文化的尊重
- _____ 改變鄒族的傳統慶典
- _____ 改變鄒族文化以滿足遊客的需求
- _____ 展示給遊客的鄒族文化和真實的鄒族文化不同
- _____ 因為遊客不尊重當地居民的傳統習慣，增加緊張氣氛
- _____ 當地居民的日常生活被遊客侵犯
- _____ 增加當地居民與遊客的衝突
- _____ 減少居民說鄒族語言的次數
- _____ 社區的建築漸漸失去傳統鄒族的文化特色
- _____ 其他 _____
- _____ 其他 _____
- _____ 其他 _____
- _____ 其他 _____
- _____ 其他 _____

Number: _____ **Appendix C: English Survey for the Pre-Test**

Date: _____

Saviki Community Cultural Impact Survey and Consent

MICHIGAN STATE	Adviser: Dr. Christine Vogt
UNIVERSITY	Ph.D. Candidate: Gwo-Bao Liou Department of Community, Agriculture, Recreation and Resource Studies Sponsor: CARRS Graduate Office, Michigan State University, USA

Dear Saviki Community Resident:

I am a Ph.D. Candidate at Michigan State University in the USA. I am conducting my dissertation for the purpose of estimating the impacts of ecotourism on Tsou culture. You have been selected to participate in a research study, Ecotourism Cultural Impact Analysis. Only adult residents (i.e., 20 years old and over) living in the Saviki community are selected as the respondents. Your participation in this study will take about five minutes. This survey will ask you to report the five most important negative and positive cultural impacts in regard to ecotourism development in your community.

Potential Risks and Benefits

There is no known risk in participating in this study. The study results will benefit the residents of the Saviki community by 1) identifying cultural impacts of ecotourism; 2) clarifying the mechanisms that form cultural impacts of ecotourism; 3) estimating the degrees of acculturation; and 4) reviewing ecotourism development. The findings for this study can also be applied to the development of management strategies to protect Tsou culture.

Privacy and Confidentiality

In this survey, your responses will be anonymous. The information that you provide for data analysis and reporting results will also remain anonymous. The data will be stored in a locked room and destroyed five years after the analysis is completed.

Your Rights to Participate or Withdraw

Your participation is voluntary. You indicate your consent to participate in this research by completing this survey. Refusal to participate will involve no penalty or loss of benefits. You may choose not to answer specific questions or to stop participating at any time. Nevertheless, your comments are very important to protecting Tsou culture. We are very appreciative of your participation.

Your Rights to Review the Personal Information

You can request to review, to make duplications of, to supplement or correct, to discontinue collection of, processing or use of, or deletion of your data and personal information at any time.

Incentive Gift

If you complete the survey, you are eligible for a drawing to receive a bag of rice as a gift of our thanks for your participation. A lottery ticket will be delivered to you when we receive your completed survey.

Contact Information

If you have any questions about this study, please contact the researcher, Gwo-Bao Liou, at liougwob@msu.edu, phone 0919-410-343 (Taiwan) and 1-517-355-3008 (USA). If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University's Human Research Protection Program at 1-517-355-2180, Fax 1-517-432-4503, or e-mail irb@msu.edu or regular mail at Olds Hall, 408 West Circle Drive #207, MSU, East Lansing, MI 48824, USA.

Thank you very much for your help.

Gwo-Bao Liou

You indicate your willingness to participate in this research by completing this survey.

Saviki Community Ecotourism Survey

Part I: Acculturation

Cultural Identities, Values, and Ethnic Pride

1. How do you identify yourself? *(please check one)*

- ☐ Very Tsou People
- ☐ Mostly Tsou People
- ☐ Bicultural
- ☐ Mostly non-Tsou People
- ☐ Very non-Tsou People

2. Rate yourself on how much you believe in the values of Tsou People (e.g., Tsou People's culture of sharing): *(please check one)*

- ☐ Strongly believe
- ☐ Moderately believe
- ☐ Believe a little
- ☐ Do not believe but do not feel negative toward Tsou People's values
- ☐ Do not believe and feel negative toward Tsou People's values

3. As a member of Saviki Community, how much pride do you have in Tsou People?

- ☐ 1. Extremely proud
- ☐ 2. Moderately proud
- ☐ 3. Neither proud nor negative
- ☐ 4. Somewhat negative
- ☐ 5. Strongly negative

Cultural Exposure and Interaction

4. Which language, Tsou language or Chinese, do you speak better? *(please check one)*

- ☐ Speak only Tsou language
- ☐ Speak Tsou language better than Chinese
- ☐ Speak both Tsou language and Chinese equally well
- ☐ Speak Chinese better than Tsou language
- ☐ Speak only Chinese

5. What is your music preference? *(please check one)*

- ☐ Only Tsou People's music
- ☐ Mostly Tsou People's music
- ☐ Equally Tsou and Plain People's music
- ☐ Mostly Plain People's music
- ☐ Only Plain People's music

6. What is your food preference? *(please check one)*

- ☐ Exclusively Tsou People's food (e.g., Tsou-flavor roast meat, rice in a bamboo tube, banana glutinous rice cakes)
- ☐ Mostly Tsou People's food

- ☐ About equally Tsou People's and Plain People's food
- ☐ Mostly Plain People's food
- ☐ Exclusively Plain People's food

7. Have you participated in Tsou ceremonies, or their related traditional activities (e.g., Millet Ceremony, Taiwan Ku Fish Festival)? *(please check one)*

- ☐ Nearly all
- ☐ Most of them
- ☐ Some of them
- ☐ A few of them
- ☐ None at all

8. What was the ethnic origin of the friends and peers you have? *(please check one)*

- ☐ Almost exclusively Tsou People
- ☐ Mostly Tsou People
- ☐ About equally Tsou people and Plain People
- ☐ Mostly Plain People
- ☐ Almost exclusively Plain People

Acculturation Motivation and Degree of Acculturation

9. How important is it to you to become part of Plain People's culture? *(please check one)*

- ☐ Most Important
- ☐ Very important
- ☐ Important
- ☐ Somewhat important
- ☐ Least important

10. How important is it to you to avoid becoming part of Plain People's culture? *(please check one)*

- ☐ Most Important
- ☐ Very important
- ☐ Important
- ☐ Somewhat important
- ☐ Least important

11. To what extent would you say you have become like the Plain People? *(please check one)*

- ☐ Completely like
- ☐ Very like
- ☐ Like
- ☐ Somewhat like
- ☐ Not at all like

12. To what extent would you say you have adapted to Plain People's culture? *(please check one)*

- ☐ Completely adapted
- ☐ Very adapted
- ☐ Moderately adapted
- ☐ Somewhat adapted
- ☐ Not at all adapted

Part II. Ecotourism and Perceived Cultural Impacts

13. Please indicate the extent to which you agree or disagree with each of the following statements; note the number that accurately describes the features of ecotourism development in Saviki Community. *(please circle one number for each item)*

Items	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
Ecotourism is developed in accordance with Tsou culture and values.	1	2	3	4	5	6	7
Ecotourism is developed for promoting the practice of Tsou customs.	1	2	3	4	5	6	7
Ecotourism is utilized to manage Tsou cultural property (e.g., art of Tsou dances, the valley of the Danayigu River).	1	2	3	4	5	6	7
Local Tsou People control ecotourism operations.	1	2	3	4	5	6	7
Ecotourism is utilized to regain rights to use the traditional land of the Tsou People.	1	2	3	4	5	6	7

13. (cont'd)

Items	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
The Tsou tribe and ecotourism operations integrate together well.	1	2	3	4	5	6	7
Tsou People participate in determining the use of resources in ecotourism operations, including people.	1	2	3	4	5	6	7
Ecotourism is helping to improve the respect for Tsou culture.	1	2	3	4	5	6	7
Ecotourism provides positive experiences for local residents.	1	2	3	4	5	6	7
Ecotourism provides funding for conservation.	1	2	3	4	5	6	7
Ecotourism is appropriate for local conditions (e.g., local political affairs, environment, and society).	1	2	3	4	5	6	7

14. I would like you to think of the level of the cultural impacts in regard to ecotourism development in Saviki Community. Overall, how would you rate the following cultural impacts in your community? *(please circle one number for each cultural impact)*

Positive Cultural Impacts	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
Tsou cultural heritage has been preserved (e.g., art of Tsou dances, the valley of the Danayigu River).	1	2	3	4	5	6	7
Local cultural activities have been preserved and inherited (e.g., Taiwan Ku Fish Festival).	1	2	3	4	5	6	7
Local traditional crafts have been preserved and inherited.	1	2	3	4	5	6	7
The team spirit of the community has been enhanced.	1	2	3	4	5	6	7
Local residents have learned more about Tsou culture.	1	2	3	4	5	6	7

14. (cont'd)

Negative Cultural Impacts	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
Tsou People's values have been replaced by tourists' cultural values.	1	2	3	4	5	6	7
Tsou culture has been modified to satisfy tourists' demands.	1	2	3	4	5	6	7
There has been an increasingly tense atmosphere, since tourists do not respect the customs and habits of local residents.	1	2	3	4	5	6	7
The amount of Tsou language being spoken among local residents has decreased.	1	2	3	4	5	6	7
The local culture demonstrated to tourists has been different than the authentic Tsou culture.	1	2	3	4	5	6	7

Part III: Demographic Information

15. What is your gender? *(please check one)*

☐ Male ☐ Female

16. What is your age? *(please fill in the number of years)* I am _____ years old.

17. Which ethnic identification does (did) your mother use? *(please check one)*

☐ Tsou People ☐ Non-Tsou People

18. Which ethnic identification does (did) your father use? *(please check one)*

☐ Tsou People ☐ Non-Tsou People

19. Do you wish to keep the identity of Tsou People?

(please check one)

☐ Yes ☐ No

20. Is it important to learn to be like the Plain People (Han Chinese)? *(please check one)*

☐ Yes ☐ No

21. What is your marital status? *(please check one)*

☐ Married, with children ☐ Married, no children
☐ Single, never married ☐ Single, formerly married

22. What is your highest level of education? *(please check one)*

- ☐ Junior high school or less
- ☐ Senior high school
- ☐ College
- ☐ Graduate school or more

23. Have you participated in any environmental conservative organizations?
(please check one)

- ☐ Yes
- ☐ No

24. Which ecotourism operations have you participated in? *(please check all that apply)*

- ☐ Interpretation
- ☐ Singing
- ☐ Dancing
- ☐ Management
- ☐ Tourist Services
- ☐ Making traditional crafts
- ☐ Hotel Industry
- ☐ Retail
- ☐ Restaurant industry
- ☐ Travel Agency
- ☐ Other _____
- ☐ None

25. Which industry best describes your present job? *(please check all that apply)*

- ☐ Agriculture
- ☐ Animal breeding
- ☐ Hunting
- ☐ Ecotourism
- ☐ Travel Agency
- ☐ Restaurant industry
- ☐ Hotel Industry
- ☐ Retail
- ☐ Making traditional crafts
- ☐ Government
- ☐ Construction
- ☐ Temporary work
- ☐ Education
- ☐ Student
- ☐ Housekeeper
- ☐ Retired
- ☐ Unemployed
- ☐ Other _____

26. Have you ever gone to the Plain Peoples' place to work?

- ☐ Yes, I have gone to the Plain Peoples' place to work.
- ☐ No, I have never gone to the Plain People's place to work.

27. How many adults (20 years and older), including yourself and how many children live in your household? *(please fill in numbers)*

Number of adults: _____, Number of children: _____

28. What is your monthly income? *(please check one)*

- ☐ No income
- ☐ Less than NT \$10,000
- ☐ NT \$10,000–19,999
- ☐ NT \$20,000–29,999
- ☐ NT \$30,000–39,999
- ☐ NT \$40,000–49,999
- ☐ NT \$50,000–59,999
- ☐ NT \$60,000–69,999
- ☐ NT \$70,000–79,999
- ☐ NT \$80,000 or more

Thank you very much for your help!

Appendix D: Chinese Survey for the Pre-Test

編碼: _____

日期: _____

山美社區生態旅遊之調查研究與參與同意書

MICHIGAN STATE UNIVERSITY	指導教授: 佛格克莉絲汀博士 博士候選人: 劉國寶 研究單位: 社區、農業、休閒遊憩與資源研究系 贊助單位: 美國密西根州立大學社區、農業、休閒遊憩與資源研究所
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親愛的山美社區居民：

我是美國密西根州立大學的博士候選人，正進行生態旅遊文化衝擊之博士論文研究。論文目的是為了評估生態旅遊對鄒族文化所帶來的衝擊。您被選為受訪者參與本項研究。此研究僅限 20 歲以上的山美社區成年居民參與。您可能需要花費 15 分鐘的時間來完成問卷。本調查將請您回答您對鄒族文化、發展生態旅遊、以及文化衝擊的態度，並請您填答您的基本資料。

潛在風險與效益

參與本研究沒有任何已知風險。本研究成果將提供山美社區居民之效益包括: 1) 了解生態旅遊對文化的衝擊可有那些面向; 2) 闡明生態旅遊對當地文化的衝擊機制; 3) 評估鄒族文化的變遷程度; 與 4) 檢視生態旅遊的發展方向。研究成果將有助於研擬保護鄒族文化的管理策略。

隱私與保密

您將以不具名的方式填答此問卷。在分析過程與成果報告中，您提供的訊息將維持匿名。您提供的資料將放置於上鎖的房間內。這些資料將於完成分析五年後銷毀。

參與和退出本調查的權利

本調查採志願式參與。您協助完成調查，表示您同意參與本研究。拒絕參與不會有任何處罰和損失。您可能選擇不回答某些問題，或在任何時候終止參與。然而，您的意見對保護鄒族文化很重要，我們十分感謝您的參與。

您檢視個人資訊的權利

您可以在任何時間要求查閱、複製、補充、更正、停止蒐集、停止處理、停止利用或刪除您提供的訊息與個人資料。

完成問卷的獎品

為了感謝您填完問卷，如果您完整的填完問卷，您將可以參加抽獎，抽獎的獎品是一袋白米。當我們收到您填完所有題目的問卷後，將給您一張獎品的摸彩卷。

聯絡資訊

如果您有任何關於此研究的問題，請聯絡研究人員：劉國寶。聯絡訊息是：liougwob@msu.edu (電子信箱)；聯絡電話：0919-410-343 (台灣)、1-517-355-3008 (美

國)。如果您有問題、對參與研究的角色或權利有所意見、想獲得或提供更多訊息、或對此研究有所抱怨，您可以用具名或不具名的方式聯絡美國密西根州立大學的人類研究保護計畫室。聯絡訊息是：電話 1-517-355-2180 (美國)、傳真 1-517-432-4503 (美國)、電子信箱 irb@msu.edu 或寄信到 Olds Hall, 408 West Circle Drive #207, MSU, East Lansing, MI 48824, USA。

十分感謝您的協助

劉國寶敬上

您協助完成調查，表示您同意參與本研究

山美社區生態旅遊調查

第一部份：文化變遷與適應

文化特質、價值觀與族群光榮

1. 您如何認定自己的身份？（單選）

- ☐ 十足的鄒族人
- ☐ 很像鄒族人
- ☐ 同時像鄒族人和平地人
- ☐ 很不像鄒族人
- ☐ 十分不像鄒族人

2. 您有多相信鄒族的價值觀(例如：鄒族的分享文化)？(單選)

- ☐ 十分相信
- ☐ 普通相信
- ☐ 有一點相信
- ☐ 不相信，但對鄒族的價值觀不反感
- ☐ 不相信，而且對鄒族的價值觀反感

3. 以一個山美社區居民的身份，您覺得當鄒族人有多光榮？（單選）

- ☐ 十分光榮
- ☐ 普通光榮
- ☐ 不光榮也不羞恥
- ☐ 有一些羞恥
- ☐ 很羞恥

文化接觸與互動

4. 鄒族語和國語，那一種您說得比較好？（單選）

- ☐ 只會說鄒族語
- ☐ 鄒族語說得比國語好
- ☐ 鄒族語和國語說得一樣好
- ☐ 國語說得比鄒族語好
- ☐ 只會說國語

5. 您比較喜歡哪一種音樂？（單選）

- ☐ 只喜歡鄒族的音樂
- ☐ 比較喜歡鄒族的音樂
- ☐ 鄒族的音樂和平地人的音樂一樣喜歡
- ☐ 比較喜歡平地人的音樂
- ☐ 只喜歡平地人的音樂

6. 您比較喜歡哪一種食物？(單選)

- ☐只喜歡鄒族的食物(例如: 鄒族的烤肉、竹筒飯、香蕉糯米糕)
- ☐比較喜歡鄒族的食物
- ☐鄒族的食物和平地人的食物一樣喜歡
- ☐比較喜歡平地人的食物
- ☐只喜歡平地人的食物

7. 您有參加鄒族的慶典與相關的傳統活動嗎(例如: 小米祭、鯪魚節)? (單選)

- ☐幾乎參加所有的慶典與相關的傳統活動
- ☐常常參加
- ☐參加一些
- ☐很少參加
- ☐從來不參加

8. 您的朋友是那一個族群？(單選)

- ☐幾乎都是鄒族人
- ☐大部分是鄒族人
- ☐鄒族人和平地人一樣多
- ☐大部分是平地人
- ☐幾乎都是平地人

文化間同化的動機與程度

9. 對您來說同化成為平地人的一分子有多重要？(單選)

- ☐十分重要
- ☐很重要
- ☐重要
- ☐有一些重要
- ☐完全不重要

10. 對您來說避免同化成為平地人的一分子有多重要？(單選)

- ☐十分重要
- ☐很重要
- ☐重要
- ☐有一些重要
- ☐完全不重要

11.您覺得您有多像平地人？(單選)

- ☐跟平地人一模一樣
- ☐很像平地人
- ☐有一半像平地人
- ☐只有一點像平地人
- ☐完全不像平地人

12.您有多適應平地人的文化？(單選)

- ☐完全適應平地人的文化
- ☐很適應平地人的文化
- ☐中等適應平地人的文化
- ☐有一些適應平地人的文化
- ☐完全不適應平地人的文化

第二部份：生態旅遊與文化衝擊

13.有關山美社區生態旅遊的發展，請您就以下的敘述，選擇同意與不同意的程度:

項目	非常不同意	不同意	稍微不同意	普通同意	稍微同意	同意	非常同意
生態旅遊的發展符合鄒族的文化與價值	1	2	3	4	5	6	7
生態旅遊的發展是為了促進鄒族傳統習俗的延續	1	2	3	4	5	6	7
生態旅遊是用來管理鄒族文化資產(例如: 鄒族舞蹈藝術、達娜依谷)	1	2	3	4	5	6	7
生態旅遊的運轉是由鄒族居民支配	1	2	3	4	5	6	7
生態旅遊是用來幫助鄒族居民重新取得傳統的土地使用權	1	2	3	4	5	6	7
鄒族部落和生態旅遊結合得很好	1	2	3	4	5	6	7
在生態旅遊的運轉過程，鄒族居民有參與資源如何運用的決策(例如: 人力如何運用)	1	2	3	4	5	6	7
生態旅遊有助於增進對大家對於鄒族文化的敬重	1	2	3	4	5	6	7
生態旅遊提供居民的經驗是好的	1	2	3	4	5	6	7
生態旅遊提供保育的經費	1	2	3	4	5	6	7
生態旅遊的發展適合山美社區的狀況(例如: 適合山美社區的環境、社會與公共事務)	1	2	3	4	5	6	7

14.請您想一想生態旅遊發展對山美社區文化的影響。整體來說，您會如何評價生態旅遊對山美社區文化的所造成的影響與衝擊？

正面文化影響	非常不同意	不同意	稍微不同意	普通同意	稍微同意	同意	非常同意
保護鄒族文化遺產(例如: 鄒族舞蹈藝術、達娜依谷)	1	2	3	4	5	6	7
傳承與保護在地文化活動(例如: 鯪魚節)	1	2	3	4	5	6	7
傳承與保護在地傳統手工藝	1	2	3	4	5	6	7
增進山美社區的團隊合作精神	1	2	3	4	5	6	7
讓社區居民學習更多鄒族文化	1	2	3	4	5	6	7

負面文化衝擊	非常不同意	不同意	稍微不同意	普通同意	稍微同意	同意	非常同意
鄒族的文化價值被遊客的文化價值所取代	1	2	3	4	5	6	7
改變鄒族文化以滿足遊客的需求	1	2	3	4	5	6	7
因為遊客不尊重當地居民的傳統習慣，增加緊張氣氛	1	2	3	4	5	6	7
減少居民說鄒族語言的次數	1	2	3	4	5	6	7
展示給遊客的鄒族文化和真實的鄒族文化不同	1	2	3	4	5	6	7

第三部份：基本資料

15.您的性別？(單選)

☐男 ☐女

16.您的年齡？(請填年齡) 我今年 _____ 歲

17.您母親是鄒族人嗎？(單選)

☐是鄒族人 ☐不是鄒族人

18. 您父親是鄒族人嗎？(單選)

☐是鄒族人 ☐不是鄒族人

19. 您是否希望維持鄒族人的身份？(單選)

☐是 ☐否

20. 對您來說，學習成為一個平地人重要嗎？(單選)

☐重要 ☐不重要

21. 您的婚姻狀況？(單選)

☐已婚，有小孩 ☐已婚，沒有小孩

☐單身，沒結過婚 ☐單身，有結過婚

22. 您的教育程度？(單選)

☐國中或以下

☐高中

☐大學(含專科)

☐研究所或以上

23. 您參加過環境保護組織嗎？(單選)

☐曾參加 ☐不曾參加

24. 您參加過生態旅遊的那些營運？(複選)

☐解說 ☐歌唱 ☐舞蹈

☐經營管理 ☐服務遊客 ☐製作傳統手工藝品

☐零售業 ☐餐廳 ☐旅館(含民宿與露營)

☐旅行社 ☐其他 _____

☐不曾參加任何生態旅遊的營運

25. 您的職業？(複選)

☐農業 ☐畜牧業 ☐打獵 ☐製作傳統手工藝品

☐生態旅遊 ☐旅行社 ☐餐廳 ☐旅館(含民宿與露營)

☐零售業 ☐政府機構 ☐土木工程 ☐臨時工

☐教育 ☐學生 ☐家管

☐退休 ☐待業中 ☐其他 _____

26. 您曾經到平地工作嗎？(單選)

☐曾經到平地工作 ☐不曾到平地工作

27. 您家中有多少成年人(20 歲含以上)與小孩？(請填人數)

成年人人數：_____，小孩人數：_____

28.您的月收入約為？(單選)

☐無收入

☐\$10,000

☐\$10,000 – 19,999

☐\$20,000 – 29,999

☐\$30,000 – 39,999

☐\$40,000 – 49,999

☐\$50,000 – 59,999

☐\$60,000 – 69,999

☐\$70,000 – 79,999

☐\$80,000 或以上

很感謝您的協助!

Appendix E: English Survey for the Main Survey

Number: _____

Date: _____

Saviki Community Cultural Impact Survey and Consent

MICHIGAN STATE UNIVERSITY	Adviser: Dr. Christine Vogt Ph.D. Candidate: Gwo-Bao Liou Department of Community, Agriculture, Recreation and Resource Studies Sponsor: CARRS Graduate Office, Michigan State University, USA
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Dear Saviki Community Resident:

I am a Ph.D. Candidate at Michigan State University in the USA. I am conducting my dissertation for the purpose of estimating the impacts of ecotourism on Tsou culture. You have been selected to participate in a research study, Ecotourism Cultural Impact Analysis. Only adult residents (i.e., 20 years old and over) living in the Saviki community are selected as the respondents. Your participation in this study will take about five minutes. This survey will ask you to report the five most important negative and positive cultural impacts in regard to ecotourism development in your community.

Potential Risks and Benefits

There is no known risk in participating in this study. The study results will benefit the residents of the Saviki community by 1) identifying cultural impacts of ecotourism; 2) clarifying the mechanisms that form cultural impacts of ecotourism; 3) estimating the degrees of acculturation; and 4) reviewing ecotourism development. The findings for this study can also be applied to the development of management strategies to protect Tsou culture.

Privacy and Confidentiality

In this survey, your responses will be anonymous. The information that you provide for data analysis and reporting results will also remain anonymous. The data will be stored in a locked room and destroyed five years after the analysis is completed.

Your Rights to Participate or Withdraw

Your participation is voluntary. You indicate your consent to participate in this research by completing this survey. Refusal to participate will involve no penalty or loss of benefits. You may choose not to answer specific questions or to stop participating at any time. Nevertheless, your comments are very important to protecting Tsou culture. We are very appreciative of your participation.

Your Rights to Review the Personal Information

You can request to review, to make duplications of, to supplement or correct, to discontinue collection of, processing or use of, or deletion of your data and personal information at any time.

Incentive Gift

If you complete the survey, you are eligible for a drawing to receive a bag of rice as a gift of our thanks for your participation. A lottery ticket will be delivered to you when we receive your completed survey.

Contact Information

If you have any questions about this study, please contact the researcher, Gwo-Bao Liou, at liougwob@msu.edu, phone 0919-410-343 (Taiwan) and 1-517-355-3008 (USA). If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University's Human Research Protection Program at 1-517-355-2180, Fax 1-517-432-4503, or e-mail irb@msu.edu or regular mail at Olds Hall, 408 West Circle Drive #207, MSU, East Lansing, MI 48824, USA.

Thank you very much for your help.

Gwo-Bao Liou

You indicate your willingness to participate in this research by completing this survey.

Saviki Community Ecotourism Survey

Part I: Acculturation

Cultural Identities, Values, and Ethnic Pride

1. How do you identify yourself? *(please check one of the five items)*

- ☐ Very Tsou People
- ☐ Mostly Tsou People
- ☐ Bicultural
- ☐ Mostly Non-Tsou People
- ☐ Very Non-Tsou People

2. Rate yourself on how much you believe in the values of the Tsou People (e.g., Tsou people's culture of sharing): *(please check one of the five items)*

- ☐ Strongly believe
- ☐ Moderately believe
- ☐ Believe a little
- ☐ Do not believe but do not feel negative toward Tsou People's values
- ☐ Do not believe and feel negative toward Tsou People's values

3. As a member of Saviki Community, how much pride do you have in Tsou People? *(please check one of the five items)*

- ☐ 1. Extremely proud
- ☐ 2. Moderately proud
- ☐ 3. Neither proud nor negative
- ☐ 4. Somewhat negative
- ☐ 5. Strongly negative

Cultural Exposure and Interaction

4. Which language, Tsou language or Chinese, do you speak better? *(please check one of the five items)*

- ☐ Speak only Tsou language
- ☐ Speak Tsou language better than Chinese
- ☐ Speak both Tsou language and Chinese equally well
- ☐ Speak Chinese better than Tsou language
- ☐ Speak only Chinese

5. What is your music preference? *(please check one of the five items)*

- ☐ Only Tsou People's music
- ☐ Mostly Tsou People's music
- ☐ Equally Tsou and Plain People's music
- ☐ Mostly Plain People's music
- ☐ Only Plain People's music

6. What is your food preference? *(please check one of the five items)*

- ☐ Exclusively Tsou People's food (e.g., Tsou-flavor roast meat, rice in a bamboo tube, banana glutinous rice cakes)
- ☐ Mostly Tsou People's food
- ☐ About equally Tsou People's and Plain People's food
- ☐ Mostly Plain People's food
- ☐ Exclusively Plain People's food

7. Have you participated in Tsou ceremonies, or their related traditional activities (e.g., Millet Ceremony, Taiwan Ku Fish Festival)? *(please check one of the five items)*

- ☐ Nearly all
- ☐ Most of them
- ☐ Some of them
- ☐ A few of them
- ☐ None at all

8. What is the ethnic origin of the friends and peers you have? *(please check one of the five items)*

- ☐ Almost exclusively Tsou People
- ☐ Mostly Tsou People
- ☐ About equally Tsou People and Plain People
- ☐ Mostly Plain People
- ☐ Almost exclusively Plain People

Acculturation Motivation and Degree of Acculturation

9. How important is it to you to avoid becoming a Plain People? *(please check one of the five items)*

- ☐ Most Important
- ☐ Very important
- ☐ Important
- ☐ Somewhat important
- ☐ Least important

10. How important is it to you to become a Plain People? *(please check one of the five items)*

- ☐ Most Important
- ☐ Very important
- ☐ Important
- ☐ Somewhat important
- ☐ Least important

11. To what extent would you say you have become like a Plain People? *(please check one of the five items)*

- ☐ Completely like
- ☐ Very like
- ☐ Like
- ☐ Somewhat like
- ☐ Not at all like

12. To what extent would you say you have adapted to Plain People's culture? *(please check one of the five items)*

- ☐ Completely adapted
- ☐ Very adapted
- ☐ Moderately adapted
- ☐ Somewhat adapted
- ☐ Not at all adapted

Part II. Ecotourism and Perceived Cultural Impacts

13. Please indicate the extent to which you agree or disagree with each of the following statements; note the number that accurately describes the features of ecotourism development in Saviki Community. *(please circle one number for each item)*

Items	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
The community's ecotourism has been developed in accordance with Tsou culture and values.	1	2	3	4	5	6	7
The community's ecotourism has been developed to promote the practice of Tsou customs.	1	2	3	4	5	6	7
The community's ecotourism has been utilized to manage Tsou cultural property (e.g., art of Tsou dances, the valley of the Danayigu River).	1	2	3	4	5	6	7
The operation of the ecotourism in this community has been controlled by local Tsou people.	1	2	3	4	5	6	7
The community's ecotourism has been utilized to regain rights to use the traditional land of Tsou People.	1	2	3	4	5	6	7

13. (cont'd)

Items	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
The Tsou tribe and ecotourism in this community have integrated together well.	1	2	3	4	5	6	7
Tsou people have participated in determining the use of resources in this community's ecotourism operations, including people.	1	2	3	4	5	6	7
The community's ecotourism has helped to improve the respect for Tsou culture.	1	2	3	4	5	6	7
The community's ecotourism has provided positive experiences for local residents.	1	2	3	4	5	6	7
The community's ecotourism has provided funding for conservation.	1	2	3	4	5	6	7
The community's ecotourism has been appropriate for local conditions (e.g., local political affairs, environment, and society).	1	2	3	4	5	6	7

14. I would like you to think of the level of the cultural impacts in regard to ecotourism development in Saviki Community. Overall, how would you rate the following cultural impacts in your community? *(please circle one number for each cultural impact)*

Positive Cultural Impacts	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
The community's ecotourism has preserved Tsou cultural heritage (e.g., art of Tsou dances, the valley of the Danayigu River).	1	2	3	4	5	6	7
The community's ecotourism has preserved and inherited local cultural activities (e.g., Taiwan Ku Fish Festival).	1	2	3	4	5	6	7
The community's ecotourism has preserved and inherited local traditional crafts	1	2	3	4	5	6	7
The community's ecotourism has enhanced the team spirit of the community.	1	2	3	4	5	6	7
The community's ecotourism has made local residents learn more about Tsou culture.	1	2	3	4	5	6	7

14. (cont'd)

Negative Cultural Impacts	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
The community's ecotourism has caused Tsou People's values to be replaced by tourists' cultural values.	1	2	3	4	5	6	7
The community's ecotourism has modified Tsou culture to satisfy tourists' demands.	1	2	3	4	5	6	7
In the community's ecotourism, some tourists do not respect the customs and habits of local residents, which causes an increasingly tense atmosphere between the residents and tourists.	1	2	3	4	5	6	7
Due to the development of ecotourism in this community, the amount of Tsou language being spoken among local residents has decreased.	1	2	3	4	5	6	7
Through the development of ecotourism in this community, the local culture demonstrated to tourists has been different than the authentic Tsou culture.	1	2	3	4	5	6	7

Part III: Demographic Information

15. What is your gender? *(please check one)*

☐ Male ☐ Female

16. What is your age? *(please fill in the number of years)* I am _____ years old.

17. Which ethnic identification does (did) your mother use? *(please check one)*

☐ Tsou People ☐ Non-Tsou People

18. Which ethnic identification does (did) your father use? *(please check one)*

☐ Tsou People ☐ Non-Tsou People

19. Do you wish to keep the identity of Tsou People?

(please check one)

- ☐ Yes ☐ No

20. Is it important to learn Plain People's culture? *(please check one)*

- ☐ Yes ☐ No

21. What is your marital status? *(please check one)*

- ☐ Married, with children ☐ Married, no children
☐ Single, never married ☐ Single, formerly married

22. What is your highest level of education? *(please check one)*

- ☐ Junior high school, elementary school or less
☐ Senior high school
☐ College
☐ Graduate school or more

23. Have you participated in any environmental conservative action (e.g., fish conservation for the community, environment cleanness for the community)? *(please check one)*

- ☐ Yes ☐ No

24. Which ecotourism operations have you participated in? *(please check all that apply)*

- | | | |
|---|--|--|
| ☐ Interpretation | ☐ Singing | ☐ Dancing |
| ☐ Management | ☐ Tourist Services | ☐ Making traditional crafts |
| ☐ Hotel Industry | ☐ Retail | ☐ Restaurant industry |
| ☐ Travel Agency | ☐ Environment Maintenance and Cleanness | ☐ Other _____ |
| ☐ None | | |

25. Which industry best describes your present job? *(please check all that apply)*

- | | | |
|---|--|--|
| ☐ Agriculture | ☐ Animal breeding | ☐ Hunting |
| ☐ Ecotourism | ☐ Travel Agency | ☐ Restaurant industry |
| ☐ Hotel Industry | ☐ Retail | ☐ Making traditional crafts |
| ☐ Government | ☐ Construction | ☐ Temporary work |
| ☐ Education | ☐ Student | ☐ Housekeeper |
| ☐ Retired | ☐ Unemployed | ☐ Other _____ |

26. Have you ever gone to Plain People's place to work?

- ☐ Yes, I have gone to Plain People's place to work.
☐ No, I have not gone to Plain People's place to work.

27. How many adults (20 years and older), including yourself and how many children live in your household? (*please fill in numbers*)

Number of adults: _____, Number of children: _____

28. What is your monthly income? (*please check one*)

- | | | |
|--|--|---|
| ☐ No income | ☐ Less than NT \$10,000 | ☐ NT \$10,000–19,999 |
| ☐ NT \$20,000–29,999 | ☐ NT \$30,000–39,999 | ☐ NT \$40,000–49,999 |
| ☐ NT \$50,000–59,999 | ☐ NT \$60,000–69,999 | ☐ NT \$70,000–79,999 |
| ☐ NT \$80,000 or more | | |

Thank you very much for your help!

Appendix F: Chinese Survey for the Main Survey

山美社區生態旅遊之調查研究與參與同意書

MICHIGAN STATE UNIVERSITY	指導教授: 佛格克莉絲汀博士
	博士候選人: 劉國寶
	研究單位: 社區、農業、休閒遊憩與資源研究系
	贊助單位: 美國密西根州立大學社區、農業、休閒遊憩與資源研究所

親愛的山美社區居民：

我是美國密西根州立大學的博士候選人，正進行生態旅遊文化衝擊之博士論文研究。論文目的是為了評估生態旅遊對鄒族文化所帶來的衝擊。您被選為受訪者參與本項研究。此研究僅限 20 歲以上的山美社區成年居民參與。您可能需要花費 15 分鐘的時間來完成問卷。本調查將請您回答您對鄒族文化、發展生態旅遊、以及文化衝擊的態度，並請您填答您的基本資料。

潛在風險與效益

參與本研究沒有任何已知風險。本研究成果將提供山美社區居民之效益包括: 1) 了解生態旅遊對文化的衝擊可有那些面向; 2) 闡明生態旅遊對當地文化的衝擊機制; 3) 評估鄒族文化的變遷程度; 與 4) 檢視生態旅遊的發展方向。研究成果將有助於研擬保護鄒族文化的管理策略。

隱私與保密

您將以不具名的方式填答此問卷。在分析過程與成果報告中，您提供的訊息將維持匿名。您提供的資料將放置於上鎖的房間內。這些資料將於完成分析五年後銷毀。

參與和退出本調查的權利

本調查採志願式參與。您協助完成調查，表示您同意參與本研究。拒絕參與不會有任何處罰和損失。您可能選擇不回答某些問題，或在任何時候終止參與。然而，您的意見對保護鄒族文化很重要，我們十分感謝您的參與。

您檢視個人資料的權利

您可以在任何時間要求查閱、複製、補充、更正、停止蒐集、停止處理、停止利用或刪除您提供的訊息與個人資料。

完成問卷的獎品

為了感謝您填完問卷，如果您完整的填完問卷，您將可以參加抽獎，抽獎的獎品是一袋白米。當我們收到您填完所有題目的問卷後，將給您一張獎品的摸彩卷。

聯絡資訊

如果您有任何關於此研究的問題，請聯絡研究人員：劉國寶。聯絡訊息是：liougwob@msu.edu (電子信箱)；聯絡電話：0919-410-343 (台灣)、1-517-355-3008 (美國)。如果您有問題、對參與研究的角色或權利有所意見、想獲得或提供更多訊息、或對此研究有所抱怨，您可以用具名或不具名的方式聯絡美國密西根州立大學的人類研究保護計畫室。聯絡訊息是：電話 1-517-355-2180 (美國)、傳真 1-517-432-4503

(美國)、電子信箱 irb@msu.edu 或寄信到 Olds Hall, 408 West Circle Drive #207, MSU, East Lansing, MI 48824, USA。

十分感謝您的協助

劉國寶敬上

您協助完成調查，表示您同意參與本研究

山美社區生態旅遊調查

第一部份：文化變遷與適應

文化特質、價值觀與族群光榮

1. 您如何認定自己的身份？(下列五個選項，請選一個)

- ☐ 十足的鄒族人
- ☐ 很像鄒族人
- ☐ 同時像鄒族人和平地人
- ☐ 很不像鄒族人
- ☐ 十分不像鄒族人

2. 您有多相信鄒族的價值觀(例如：鄒族的分享文化)？(下列五個選項，請選一個)

- ☐ 十分相信
- ☐ 普通相信
- ☐ 有一點相信
- ☐ 不相信，但對鄒族的價值觀不反感
- ☐ 不相信，而且對鄒族的價值觀反感

3. 以一個山美社區居民的身份，您覺得當鄒族人有多光榮？

(下列五個選項，請選一個)

- ☐ 十分光榮
- ☐ 普通光榮
- ☐ 不光榮也不羞恥
- ☐ 有一些羞恥
- ☐ 很羞恥

文化接觸與互動

4. 鄒族語和國語，那一種您說得比較好？(下列五個選項，請選一個)

- ☐ 只會說鄒族語
- ☐ 鄒族語說得比國語好
- ☐ 鄒族語和國語說得一樣好
- ☐ 國語說得比鄒族語好
- ☐ 只會說國語

5. 您比較喜歡哪一種音樂？(下列五個選項，請選一個)

- ☐ 只喜歡鄒族的音樂
- ☐ 比較喜歡鄒族的音樂
- ☐ 鄒族的音樂和平地人的音樂一樣喜歡
- ☐ 比較喜歡平地人的音樂
- ☐ 只喜歡平地人的音樂

6. 您比較喜歡哪一種食物？(下列五個選項, 請選一個)

- ☐ 只喜歡鄒族的食物(例如: 鄒族的烤肉、竹筒飯、香蕉糯米糕)
- ☐ 比較喜歡鄒族的食物
- ☐ 鄒族的食物和平地人的食物一樣喜歡
- ☐ 比較喜歡平地人的食物
- ☐ 只喜歡平地人的食物

7. 您有參加鄒族的慶典與相關的傳統活動嗎(例如: 小米祭、鯪魚節)？

(下列五個選項, 請選一個)

- ☐ 幾乎參加所有的慶典與相關的傳統活動
- ☐ 常常參加
- ☐ 參加一些
- ☐ 很少參加
- ☐ 從來不參加

8. 您的朋友是那一個族群？(下列五個選項, 請選一個)

- ☐ 幾乎都是鄒族人
- ☐ 大部分是鄒族人
- ☐ 鄒族人和平地人一樣多
- ☐ 大部分是平地人
- ☐ 幾乎都是平地人

文化間同化的動機與程度

9. 對您來說避免同化變成平地人有多重要？(下列五個選項, 請選一個)

- ☐ 十分重要
- ☐ 很重要
- ☐ 重要
- ☐ 有一些重要
- ☐ 完全不重要

10. 對您來說同化變成平地人有多重要？(下列五個選項, 請選一個)

- ☐ 十分重要
- ☐ 很重要
- ☐ 重要
- ☐ 有一些重要
- ☐ 完全不重要

11.您覺得您有多像平地人？(下列五個選項, 請選一個)

- ☐跟平地人一模一樣
- ☐很像平地人
- ☐有一半像平地人
- ☐只有一點像平地人
- ☐完全不像平地人

12.您有多適應平地人的文化？(下列五個選項, 請選一個)

- ☐完全適應平地人的文化
- ☐很適應平地人的文化
- ☐中等適應平地人的文化
- ☐有一些適應平地人的文化
- ☐完全不適應平地人的文化

第二部份：生態旅遊與文化衝擊

13.有關山美社區生態旅遊的發展，請您就以下的敘述，選擇同意與不同意的程度：
(每個項目，請圈選一個數字)

項目	非常不同意	不同意	稍微不同意	普通同意	稍微同意	同意	非常同意
社區的生態旅遊發展，有符合鄒族的文化與價值	1	2	3	4	5	6	7
社區的生態旅遊發展，有促進鄒族傳統習俗的延續	1	2	3	4	5	6	7
社區的生態旅遊，有用來管理鄒族文化資產(例如：鄒族舞蹈藝術、達娜依谷)	1	2	3	4	5	6	7
社區生態旅遊的運轉，是由鄒族居民支配	1	2	3	4	5	6	7
社區的生態旅遊，是用來幫助鄒族居民重新取得傳統的土地使用權	1	2	3	4	5	6	7
鄒族部落和社區的生態旅遊結合得很好	1	2	3	4	5	6	7
社區生態旅遊的運轉過程，鄒族居民有參與資源如何運用的決策(例如：人力如何運用)	1	2	3	4	5	6	7
社區的生態旅遊，有增進大家對於鄒族文化的敬重	1	2	3	4	5	6	7
社區的生態旅遊，給居民的經驗是好的	1	2	3	4	5	6	7
社區的生態旅遊，有提供保育的經費	1	2	3	4	5	6	7
社區的生態旅遊發展，適合山美社區的狀況(例如：適合山美社區的環境、社會與公共事務)	1	2	3	4	5	6	7

14.請您想一想生態旅遊發展對山美社區文化的影響。整體來說，您會如何評價生態旅遊對山美社區文化的所造成的影響與衝擊？(每個文化項目，請圈選一個數字)

正面文化影響項目	非常不同意	不同意	稍微不同意	普通同意	稍微同意	同意	非常同意
社區的生態旅遊，有保護鄒族文化遺產(例如：鄒族舞蹈藝術、達娜依谷)	1	2	3	4	5	6	7
社區的生態旅遊，有傳承與保護在地文化活動(例如：鯪魚節)	1	2	3	4	5	6	7
社區的生態旅遊，有傳承與保護在地傳統手工藝	1	2	3	4	5	6	7
社區的生態旅遊，有增進山美社區的團隊合作精神	1	2	3	4	5	6	7
社區的生態旅遊，讓社區居民學習更多鄒族文化	1	2	3	4	5	6	7

負面文化衝擊項目	非常不同意	不同意	稍微不同意	普通同意	稍微同意	同意	非常同意
社區的生態旅遊，使鄒族的文化價值被遊客的文化價值所取代	1	2	3	4	5	6	7
社區的生態旅遊，有改變鄒族文化以滿足遊客的需求	1	2	3	4	5	6	7
社區的生態旅遊，有遊客不尊重當地居民的傳統習慣，因而增加居民與遊客間的緊張氣氛	1	2	3	4	5	6	7
社區的生態旅遊，讓居民減少說鄒族語言的次數	1	2	3	4	5	6	7
社區的生態旅遊，展示給遊客的鄒族文化和真實的鄒族文化不同	1	2	3	4	5	6	7

第三部份：基本資料

15.您的性別？(單選)

☐男 ☐女

16.您的年齡？(請填年齡) 我今年 _____ 歲

17.您母親是鄒族人嗎？(單選)

☐是鄒族人 ☐不是鄒族人

18.您父親是鄒族人嗎？(單選)

☐是鄒族人 ☐不是鄒族人

19.您是否希望維持鄒族人的身份？(單選)

☐是 ☐否

20.對您來說，學習平地人的文化重要嗎？(單選)

☐重要 ☐不重要

21.您的婚姻狀況？(單選)

☐已婚，有小孩 ☐已婚，沒有小孩

☐單身，沒結過婚 ☐單身，有結過婚

22. 您的教育程度？(單選)

☐國中、國小或以下

☐高中

☐大學(含專科)

☐研究所或以上

23. 您參加過環境保護活動嗎(例如：社區護漁、社區環境清潔)？(單選)

☐曾參加 ☐不曾參加

24. 您參加過生態旅遊的那些營運？(複選)

☐解說 ☐歌唱 ☐舞蹈

☐經營管理 ☐服務遊客 ☐製作傳統手工藝品

☐零售業 ☐餐廳 ☐旅館(含民宿與露營)

☐旅行社 ☐環境維護清潔 ☐其他 _____

☐不曾參加任何生態旅遊的營運

25. 您的職業？(複選)

☐農業 ☐畜牧業 ☐打獵 ☐製作傳統手工藝品

☐生態旅遊 ☐旅行社 ☐餐廳 ☐旅館(含民宿與露營)

☐零售業 ☐政府機構 ☐土木工程 ☐臨時工

☐教育 ☐學生 ☐家管

☐退休 ☐待業中 ☐其他 _____

26. 您曾經到平地工作嗎? (單選)

☐曾經到平地工作 ☐不曾到平地工作

27. 您家中有多少成年人(20 歲含以上)與小孩? (請填人數)

成年人人數: _____ , 小孩人數: _____

28. 您的月收入約為? (單選)

☐ 無收入	☐ \$10,000	☐ \$10,000 – 19,999
☐ \$20,000 – 29,999	☐ \$30,000 – 39,999	☐ \$40,000 – 49,999
☐ \$50,000 – 59,999	☐ \$60,000 – 69,999	☐ \$70,000 – 79,999
☐ \$80,000 或以上		

很感謝您的協助!

Appendix G: Conducted the Pre-Test in Sinmei Community



Figure 6-1. The Entrance of Sinmei Community (For interpretation of the references to color in this and all other figures, the reader is referred to the electronic version of this dissertation.)



Figure 6-2. The Respondents Participated in the Pe-test

Appendix H: Conducted the Main Survey



Figure 6-3. The Questionnaires of the Main Survey

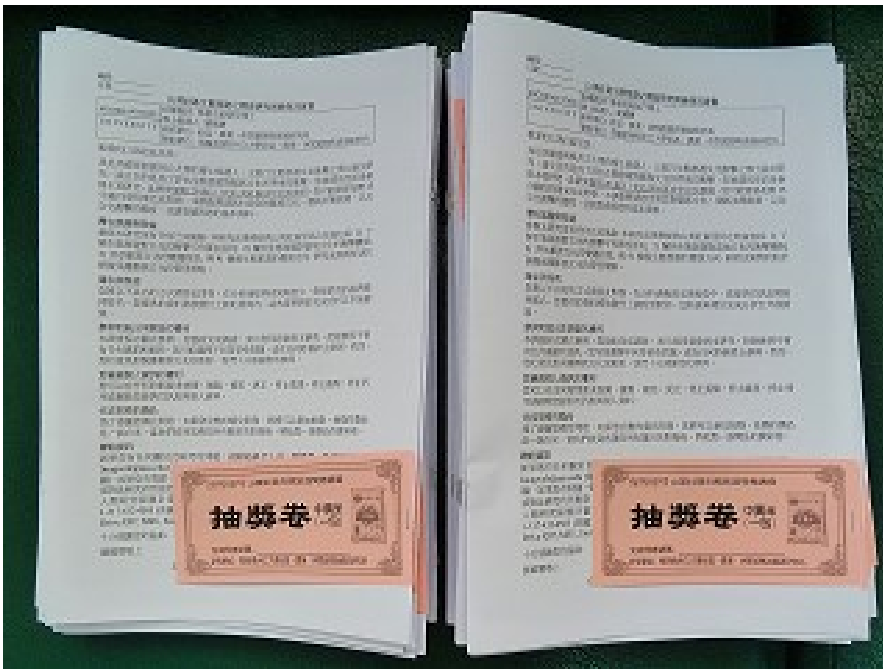


Figure 6-4. Each Questionnaire with One Lottery Ticket



Figure 6-5. This Big Dog Attacked the Investigator



Figure 6-6. The Investigator's I.D. Badge was Bitten by the Big Dog



Figure 6-7. Two Respondents Participated in the Main Survey



Figure 6-8. Questionnaires with Waterproof Bags were Adhered to the Door of the Respondents after Three Unsuccessfully Visited

Appendix I: Translators Translated the Questionnaire into Tsoi Language



Figure 6-9. The Translator Sat between Two Elder Respondents



Figure 6-10. The Translator Sat on the Right Side of the Photo

Appendix J: Traveled to Saviki Community



Figure 6-11. The Entrance of Saviki Community



Figure 6-12. The Pavilion of Tsou People



Figure 6-13. Tourists Went to See a Performance of Tsou Dance



Figure 6-14. The Performance of Tsou Dance



Figure 6-15. The Interpreter Introduced the Natural and Cultural Resources for the Tourists



Figure 6-16. The Danayigu River

Appendix K: Taiwan Ku Fish Festival in Saviki Community



Figure 6-17. Tsou Children Participated in the Taiwan Ku Fish Festival



Figure 6-18. Many Taiwan Ku Fish Were Shared with People for Releasing Them into the Valley of the Danayigu River



Figure 6-19. The Entrance of the Valley of the Danayigu River



Figure 6-20. People Went to the Valley of the Danayigu River with Taiwan Ku Fish



Figure 6-21. Tsou Children Released Fish into the Valley of the Danayigu River



Figure 6-22. People Released Fish into the Valley of the Danayigu River

REFERENCES

REFERENCES

- Alman, K. C. (1993). *The Role of Television Advertising in Acculturation: A Media System Dependency Approach*. Ph.D. Dissertation. Michigan State University.
- Alishan National Scenic Area Administration_(ANSAA). (2009). *The Achievement Report of Contract Termination and Project Completion of The Planning and Operation Project of Lijia and Shanmei Communities of Alishan National Scenic Area*. Prepared for the Alishan National Scenic Area Administration, Tourism Bureau, Ministry of Transportation and Communications, Republic of China (Taiwan). Taipei, Taiwan: Wild Fun Ecotourism Industrial Co., Ltd.
- Alishan National Scenic Area Administration. (2012). Retrieved April 18, 2012, from http://www.ali-nsa.gov.tw/nsa/chinese/07statistics/sta_a01_list.php?cate_id=208&button3=%ACd%B8%DF
- Alishan National Scenic Area Administration. (2013). Retrieved July 22, 2013, from http://www.ali-nsa.gov.tw/nsa/chinese/07statistics/sta_a01_list.php?cate_id=275&button3=%ACd%B8%DF
- Alishan Township Household Registration Office. (2011). Retrieved April 18, 2012, from <http://www.alishan-house.gov.tw/population/index.asp?Parser=99,6,37>
- Alishan Township Household Registration Office. (2013). Retrieved July 23, 2013, from <http://www.alishan-house.gov.tw/population/index.asp?Parser=99,6,37>
- Andereck, K. L., Valentine, K. M., Knopf, R. C., & Vogt, C. A. (2005). Residents' Perceptions of Community Tourism Impacts. *Annals of Tourism Research*, 32(4), 1056-1076.
- Andereck, K. L., Valentine, K. M., Vogt, C. A., & Knopf, R. C. (2007). A Cross-cultural Analysis of Tourism and Quality of Life Perceptions. *Journal of Sustainable Tourism*, 15(5), 483-502.
- Andereck, K. L., & Vogt, C. A. (2000). The Relationship between Residents' Attitudes toward Tourism and Tourism Development Options. *Journal of Travel Research*, 3(27), 27-36.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach. *Psychological Bulletin*, 103(3), 411-423.

- Ap, J. (1992). Residents' Perceptions on Tourism Impacts. *Annals of Tourism Research*, 19, 665-690.
- Becker, H. A., & Vanclay, F. (2003). *The International Handbook Of Social Impact Assessment: Conceptual and Methodological Advances*. Northampton, MA: Edward Elgar Publishing.
- Beeton, S. (1998). *Ecotourism: A Practical Guide for Rural Communities*. Australia: Landlinks.
- Beeton, S. (1998). *Ecotourism: A Practical Guide for Rural Communities*. Australia: Landlinks.
- Berry, J. W. (1980). Acculturation as Varieties of Adaptation. In A. M. Padilla (Ed.), *Acculturation: Theory, Models and Some New Findings*. Boulder: Westview Press.
- Berry, J. W. (2003). Conceptual Approaches to Acculturation. In K. M. Chun, P. B. Organista & G. Marin (Eds.), *Acculturation: Advances in Theory, Measurement and Applied Research*. Washington, DC: Washington, DC.
- Berry, J. W., Kim, U., Minde, T., & Mok, D. (1987). Comparative Studies of Acculturative Stress. *International Migration Review*, 21(3), 491-511.
- Besculides, A., Lee, M. E., & McCormick, P. J. (2002). Resident's Perceptions of the Cultural Benefits of Tourism. *Annals of Tourism Research*, 29(2), 303-319.
- Caldicott, J., & Fuller, D. (2005). The Concept and Relevance of Ecotourism to Indigenous Economic and Human Development in Remote Australian Communities. *Centre for Enterprise Development and Research*, 6, 1-17.
- Chen, M.-C. (2003). *A Study on Residents' Impact Cognition and Attitude Toward Ecotourism Development —A Case Study of Saviki Village, Chiayi County, Taiwan*. Unpublished Master Thesis, National Chung Hsing University.
- Cheng, L. H. (2004). *The Tourism Culture of Wutai Village: An Interpretation of Its Authenticity*. Unpublished Master's Thesis, National Pingtung University of Science and Technology.
- Chiou, H. J. (2002). *Quantitative Research and Statistical Analysis*. Taipei, Taiwan: Wu-Nan Book Inc.
- Chung, C.-C. (2002). *Residents' Perceptions of and Attitudes Toward Tourism Development Impact on Host Community: The Case of Saviki Community*. Unpublished Master's Thesis, Dayeh University.

- Clifton, J., & Benson, A. (2006). Planning for Sustainable Ecotourism: The Case for Research Ecotourism in Developing Country Destinations. *Journal of Sustainable Tourism*, 14(3), 238-254.
- Cohen, E. (1988). Authenticity and Commoditization in Tourism. *Annals of Tourism Research*, 15, 371-386.
- Council of Cultural Affairs. (2012). The Website of the Council of cultural Affairs, Republic of China (Taiwan). Retrieved Apr. 30, 2012, from <http://www.cca.gov.tw/law.do?method=find&id=208>.
- Cuellar, I., Harris, L. C., & Jasso, R. (1980). An Acculturation Scale for Mexican American Normal AND Clinical Populations. *Hispanic Journal of Behavioral Sciences*, 2(3), 199-217.
- Dagert, D. A. M. (2001). *The Political Ecology of Nature-Based Tourism in Canaima National Park, Venezuela and the Changing Resource Relation of the Pemon-Kamaracoto*. Unpublished Doctoral Dissertation, Michigan State University.
- Deng, C.-J., & Chen, C.-Y. (2010). A Study on the Correlation between the Attitude of Participating Extracurricular Activities and Well-Being on Junior High School Students. *Bulletin of Educational Psychology*, 41(4), 703-732.
- Deng, J., & Walker, G. J. (2007). Chinese Acculturation Measurement. *Canadian Ethnic Studies*, 39((1-2)), 187-217.
- DeVillis, R. F. (2003). *Scale Development: Theory and Applications*. New Delhi, India: Sage Publications Ltd.
- Diamantis, D. (1999). The Concept of Ecotourism: Evolution and Trends. *Current Issues in Tourism*, 2(2&3), 93-122.
- EAA. (2000). *NEAP Application Document*. Brisbane, Australia: Ecotourism Association of Australia.
- Edgell, D. L. (2006). *Managing Sustainable Tourism: A Legacy for the Future*. Binghamton: The Haworth Hospitality Press.
- Farrell, A. M. (2009). Insufficient Discriminant Validity: A Comment on Bove, Pervan, Beatty, and Shiu *Journal of Business Research*, 63 (2010), 324-327.

- Finney, S. J., & DiStefano, C. (2006). Non-Normal and Categorical Data in Structural Equation Modeling. In G. R. Hancock & R. O. Mueller (Eds.), *Structural Equation Modeling: A Second Course*. Greenwich, CT: Information Age Publishing.
- Flora, D. B., & Curran, P. J. (2004). An Empirical Evaluation of Alternative Methods of Estimation for Confirmatory Factor Analysis With Ordinal Data. *Psychological Methods*, 9(4), 466-491.
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39-50.
- Fotiou, S., Buhalis, D., & Vereczi, G. (2002). Sustainable Development of Ecotourism in Small Islands Developing States (SIDS) and Other Small Island. *Tourism and Hospitality Research*, 4(1), 79-88.
- Frontier Foundation. (2012). Featured Industry. The Website of Frontier Foundation, Taiwan. Retrieved Apr. 30, 2012, from <http://www.e-tribe.org.tw/tanayigu/DesktopDefault.aspx?tabId=185>.
- Funk, D. C., & Bruun, T. J. (2007). The Role of Socio-Psychological and Culture-Education Motives in Marketing International Sport Tourism: A Cross-Cultural Perspective. *Tourism Management*, 28, 806-819.
- Garrett, M. T., & Pichette, E. F. (2000). Red as an Apple: Native American Acculturation and Counselling with or without Reservation. *Journal of Counselling and Development*, 78(1), 3-13.
- Gartner, W. C. (1996). *Tourism Development Principles, Processes, and Policies* New York: John Wiley & Sons, Inc.
- Gliner, J. A., Morgan, G. A., & Leech, N. L. (2009). *Research Methods in Applied Settings: An Integrated Approach to Design and Analysis* (2nd. ed.). New York: Taylor and Francis Group, LLC.
- Green, D. M., Cox, C. L., Zhu, L., Krull, K. R., Srivastava, D. K., Stovall, M., et al. (2012). Risk Factors for Obesity in Adult Survivors of Childhood Cancer: A Report From the Childhood Cancer Survivor Study. *Journal of Clinical Oncology*, 30(3), 246-255.

- Greenwood, D. J. (1977). Culture by the Pound: An Anthropological Perspective on Tourism as Cultural Commoditization. In V. L. Smith (Ed.), *Hosts and Guests: The Anthropology of Tourism*. U.S.A.: University of Pennsylvania.
- Hall, M., & Lew, A. (1998). *Sustainable Tourism: A Geographical Perspective*. Prentice Hall: Harlow.
- Hinch, T. (1998). Ecotourists and Indigenous Host: Diverging Views on Their Relationship with Nature. *Current Issue in Tourism*, 1, 120-124.
- Hipwell, W. T. (2007). Taiwan Aboriginal Ecotourism: Tanayiku Natural Ecology Park. *Annals of Tourism Research*, 34(4), 876-897.
- Honey, M. (2007). Summary of Major Principles Regarding Tourism and Indigenous Peoples and Local Community. In A. Bien & A. Russillo (Eds.), *Strategies for Engaging Small Entrepreneurial, Indigenous-Run, and Community-Based Tourist Enterprises in Best Practices and Certification of Sustainability* (pp. 13-22). Center on Ecotourism and Sustainable Development: The International Ecotourism Society.
- Hsieh, C.-M. (2010). *Roles of Motivations, Past Experience, Perceptions of Service Quality, Value and Satisfaction in Museum Visitors' Loyalty*. Doctoral Dissertation, Michigan State University.
- Jones, S. (2005). Community-based Ecotourism: The Significance of Social Capital. *Annals of Tourism Research*, 32(2), 303-324.
- Iso-Ahola, S. E. (1980). *The Social Psychology of Leisure and Recreation*. Dubuque, IA: W. C. Brown.
- Kalema, B. M., Olugbara, O. O., & Kekwaletswe, R. M. (2011). The Application of Structural Equation Modeling Technique to Analyze Students Priorities in Using Course Management Systems. *International Journal of Computing and ICT Research*, 5, 34-44.
- Kang, S.-M. (2006). Measurement of Acculturation, Scale Formats, and Language Competence: Their Implications for Adjustment. *Journal of Cross-Cultural Psychology*, 37(6), 669-693.
- Khan, M. M. (1997). Tourism Development and Dependency Theory: Mass Tourism vs. Ecotourism. *Annals of Tourism Research*, 24(4), 988-991.

- Kim, M. R. (2010). *The Importance of Customer Satisfaction and Delight on Loyalty in the Tourism and Hospitality Industry*. Doctoral Dissertation, Michigan State University.
- Kiper, T., Özdemir, G., & Sağlam, C. (2011). Enviromental, Socio-Cultural and Economical Effects of Ecotourism Perceived by the Local People in the Northwestern Turkey: Kiyiköy Case. *Scientific Research and Essays*, 6(19), 4009-4020.
- Kline, R. B. (2011). *Principles and Practice of Structural Equation Modeling* (3rd ed.). New York: The Guilford Press.
- Koster, R., & Randall, J. E. (2005). Indicators of Community Economic Development Through Mural-Based Tourism. *Canadian Geographer*, 49(1), 42-60.
- Lei, P.-W., & Wu, Q. (2012). Estimation in Structural Equation Modeling. In R. H. Hoyle (Ed.), *Handbook of structural equation modeling* (pp. 164-180). New York: The Guilford Publications. Inc.
- Liang, B.-K. (2005). *Tourism Cultural Economy and Constructing Place of Aboriginal Region: A Case Study of Saviki Community Tsou*. Ph.D. Dissertation, The National Taiwan University.
- MacCannell, D. (1973). Staged Authenticity: Arrangements of Social Space in Tourist Settings. *American Journal of Sociology*, 79(3), 589-603.
- Manrai, L., & Manrai, A. (1995). Effects of Cultural Context, Gender and Acculturation on Perception of Work Versus Social/Leisure Time Usage. *Journal of Business Research*, 32(2), 115-128.
- Marin, G., & Gamba, R. J. (1996). A New Measurement of Acculturation for Hispanics: The Bidimensional Acculturation Scale for Hispanics (BAS). *Hispanic Journal of Behavioral Sciences*, 18(3), 297-316.
- Marín, G., & Gamba, R. J. (2003). Acculturation and Changes in Cultural Values. In K. M. Chun, P. Balls Organista & G. Marín (Eds.), *Acculturation: Advances in Theory, Measurement, and Applied Research* (pp. 83-93). Washington, DC, US: American Psychological Association.
- Mathieson, A., & Wall, G. (1992). *Tourism : Economic, Physical and Social Impacts*. Singapore: Longman Singapor Publishers (Pte) Ltd.

- Medina, L. K. (2005). Ecotourism and Certification: Confronting the Principle and Pragmatics of Socially Responsible Tourism. *Journal of Sustainable Tourism*, 13(3), 281-295.
- Modi, A. C., & Quittner, A. L. (2003). Validation of a Disease-Specific Measure of Health-Related Quality of Life for Children with Cystic Fibrosis. *Journal of Pediatric Psychology*, 28(7), 535-546.
- Muthén, B., & Kaplan, D. (1985). A Comparison of Some Methodologies for the Factor Analysis of Non-Normal Likert Variables. *British Journal of Mathematical and Statistical Psychology*, 38, 171-189.
- Muthén, L. K., & Muthén, B. O. (2012). *Mplus User's Guide* (7nd. ed.). Los Angeles: Muthén & Muthén.
- Newsom, J. T. (2012). Practical Approaches to Dealing with Nonnormal and Categorical Variables. Retrieved June 21, 2013, from http://www.upa.pdx.edu/IOA/newsom/semclass/ho_estimate2.pdf
- Oetting, E. R. (1993). Orthogonal Cultural Identification: Theoretical Links Between Cultural Identification and Substance Use. *NIDA Research Monograph*, 130, 32-56.
- Oetting, E. R., & Beauvais, F. (1990-91). Orthogonal Cultural Identification Theory: The Cultural Identification of Minority Adolescents. *The International journal of the addictions*, 25(5A & 6A), 655-685.
- Oetting, E. R., Swaim, R. C., & Chiarella, M. C. (1998). Factor Structure and Invariance of the Orthogonal Cultural Identification Scale among American Indian and Mexican American Youth. *Hispanic Journal of Behavioral Sciences*, 20(2), 131-154.
- Ohl-Schacherer, J., Mannigel, E., Kirkby, C., Jr, G. H. S., & Yu, D. W. (2008). Indigenous Ecotourism in the Amazon: A Case Study of 'Casa Matsigenka' in Manu National Park, Peru. *Environmental Conservation*, 35 (1), 14-25.
- Palmer, R. C., Fernandez, M. E., Tortolero-Luna, G., Gonzales, A., & Mullen, P. D. (2005). Acculturation and Mammography Screening Among Hispanic Women Living in Farmworker Communities. *Cancer Control*, 12(Supplement 2), 21-27.
- Palmer, R. C., Fernandez, M. E., Tortolero-Luna, G., Gonzales, A., & Mullen, P. D. (2005). Acculturation and Mammography Screening Among Hispanic Women Living in Farmworker Communities. *Cancer Control*, 12(Supplement 2), 21-27.

- Ramos-Sanchez, L., & Atkinson, D. R. (2009). The Relationships between Mexican American Acculturation, Cultural Values, Gender, and Help-Seeking Intentions. *Journal of Counseling & Development, 87*(1), 62-71.
- Raykov, T., & Marcoulides, G. A. (2006). *A First Course in Structural Equation Modeling*. Mahwah: Lawrence Erlbaum Associates.
- Redfield, R., Linton, R., & Herskovits, M. T. (1936). Memorandum of the study of acculturation. *American Anthropologist, 38*, 149-152.
- Rezendes, W. C. (1993). Na Mea Hawai'i: A Hawaiian Acculturation Scale. *Psychological Reports, 73*(2), 383-393.
- Robinson, M. (1999). Collaboration and Cultural Consent: Refocusing Sustainable Tourism. *Journal of Sustainable Tourism, 7*, 379-397.
- Rolston, I. H. (1992). Challenges in Environmental Ethics. In D. Copper & J. Palmer (Eds.), *The Environment in Question: Ethics and Global Issues* (pp. 135-146). London: Routledge.
- Ryan, C. (1996). *Recreational Tourism: A social science Perspective*. New York: International Thomson Publishing Company.
- Said, H., Badru, B. B., & M, S. (2011). Confirmatory Factor Analysis (Cfa) for Testing Validity And Reliability Instrument in the Study of Education. *Australian Journal of Basic and Applied Sciences, 5*(12), 1098-1103.
- Schwartz, S. J., Unger, J. B., Zamboanga, B. L., & Szapocznik, J. (2010). Rethinking the Concept of Acculturation: Implications for Theory and Research. *American Psychologist, 65*(4), 237-251.
- Simon, S. J., & Paper, D. (2007). User Acceptance of Voice Recognition Technology: An Empirical Extension of the Technology Acceptance Model. *Journal of Organizational and End User Computing, 19*(1), 24-50.
- Smith, L. T. (1999). *Decolonizing Methodologies: Research and Indigenous People*. London: Zed Books.
- Suinn, R. M., & Khoo, G. (1992). The Suinn-Lew Asian Self Identity Acculturation: Internet Address: <http://psychology.ucdavis.edu/aacdr/measures/slasia.pdf>, last accessed 10.28.2008

- Suinn, R. M., Rickard-Figueroa, K., Lew, S., & Vigil, P. (1987). The Suinn-Lew Asian Self-Identity Acculturation Scale: An Initial Report *Educational and Psychological Measurement*, 47, 401-407.
- Svoronou, E. (2005). Ecotourism as a Tool for Nature Conservation: The Role of WWF Greece in the Dadia-Lefkimi-Soufli Forest Reserve in Greece. *Journal of Sustainable Tourism*, 13(5), 456-467.
- Swarbrooke, J. (1999). Ecotourism. In J. Swarbrooke (Ed.), *Sustainable tourism management* (pp. 319-329). New York: CABI Pub.
- Tao, C.-H. T., Eagles, P. F. J., & Smith, S. L. J. (2004). Profiling Taiwanese Ecotourists Using a Self-definition Approach. *Journal of Sustainable Tourism*, 12(2), 149-254.
- TIES. (2006). *TIES Global Ecotourism Fact Sheet*. Washington: The International Ecotourism Society.
- TIES. (2012). What is Ecotourism? In The International Ecotourism Society (Ed.): Retrieved April. 18, 2012, from <http://www.ecotourism.org/what-is-ecotourism>
- TIES. (2013). What is Ecotourism? In The International Ecotourism Society (Ed.): Retrieved July. 17, 2013, from <http://www.ecotourism.org/what-is-ecotourism>
- Trochim, W. M. K. (2001). *The Research Methods Knowledge Base*. Ithaca, New York: Cornell University.
- Turner, K. L., Berkes, F., & Turner, N. J. (2012). Indigenous Perspectives on Ecotourism Development: A British Columbia Case Study. *Journal of Enterprising Communities*, 6(3), 213-229.
- Wearing, S., Stevenson, D., & Young, T. (2010). *Tourist Culture: Identity, Place and Traveller*. Los Angeles: SAGE Publications Inc.
- Wang, J., & Wang, X. (2012). *Structural Equation Modeling: Applications Using Mplus*. Chichester: Higher Education Press.
- Ward, C. (2008). Thinking Outside the Berry Boxes: New Perspectives on Identity, Acculturation and Intercultural Relations. *International Journal of Intercultural Relations*, 32, 105-114.
- Weaver, D. B. (1998). *Ecotourism in the Less Development World*. New York: Cab International.

- Yeh, C. J. (2003). Age, Acculturation, Cultural Adjustment, and Mental Health Symptoms of Chinese, Korean, and Japanese Immigrant Youths. *Cultural Diversity and Ethnic Minority Psychology*, 9(1), 34-48.
- Zeppel, H. D. (2003). Sharing the Country: Ecotourism Policy and Indigenous Peoples in Australia. In D. A. Fennell & P. k. Dowling (Eds.), *Ecotourism Policy and Planning* (pp. 55-76). Wallingford, UK: CABI.
- Zeppel, H. D. (2006). *Indigenous Ecotourism: Sustainable Development and Management*. Cambridge, Massachusetts: CABI North American Office.